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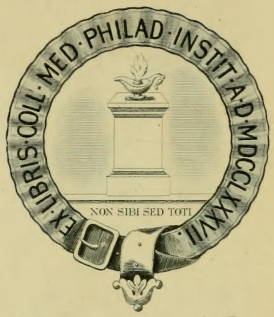

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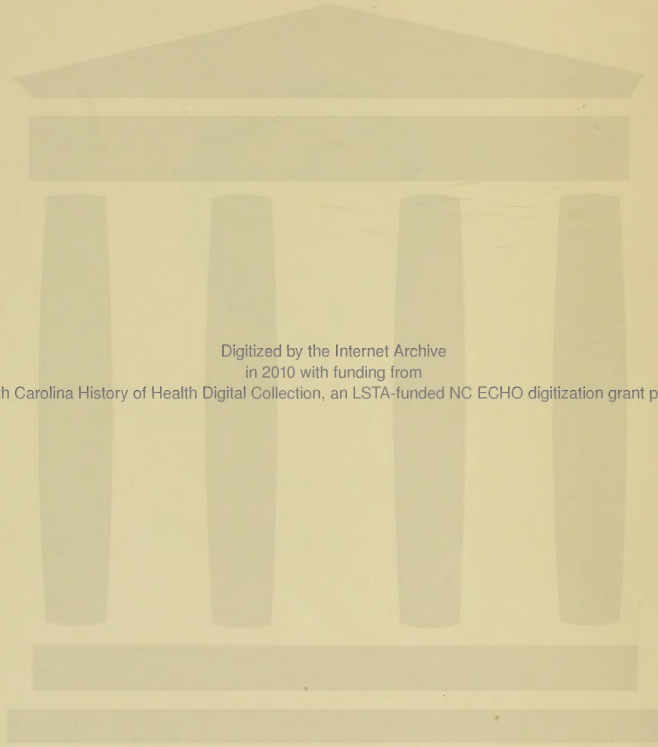

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VOL. XIII. JULY, 1898. No. 1.

The Charlotte Medical Journal.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY.

EDITED BY E. C. REGISTER, M. D., AND J.C. MONTGOMERY, M. D.

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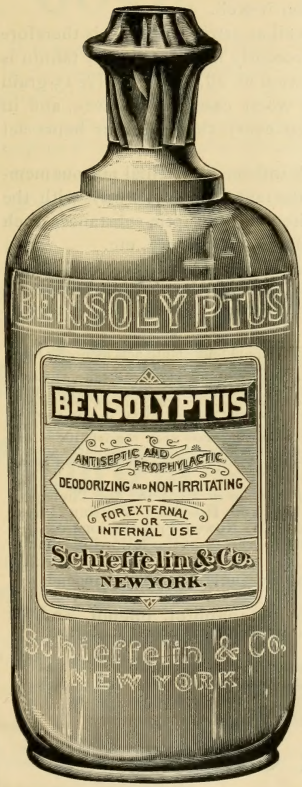

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Orphol is soothing to the irritated and inflamed intestinal mucous membrane, besides acting as a continuous disinfectant. It does away with the dangers involved in the use of caustic or poisonous antiseptic substances, such as carbolic acid, naphtol, resorcin, the bichloride of mercury, etc.

Dr. E. G. WHINNA, Physician to the Philadelphia Home for Infants, in an article entitled "Betanaphtol-Bismuth; an Ideal Remedy in Diarrhœal Diseases," published in the *Hahnemannian Monthly*, March, 1898, says as follows:

"I have been both surprised and delighted to find that Betanaphtol-Bismuth acts as nearly like a specific remedy in the acute stage of diarrhœa as any drug can do. One of the great beauties of the preparation is that it never causes vomiting, even in the most irritable stomach. Indeed it seems rather to act as a sedative to that organ. I have no hesitation in saying that none of the other preparations of bismuth now in use can compare with this combination. So firmly are we convinced of its value at the Home, that it is always the first and usually the only remedy given in our cases of diarrhœa. I have also been favorably impressed with its utility in the diarrhœas of consumptives; it promptly checks the frequent loose discharges, thus lessening the drain upon the debilitated system, and giving the poor sufferer decided relief. It is sometimes necessary to employ large doses in these cases, as much as 80 grains daily being not infrequently required. The administration of the drug may be continued for a long time, as it has no injurious effects."

REYNOLD W. WILCOX, M. D., LL. D., Professor of Medicine and Therapeutics at the New York Post-Graduate Medical School and Hospital; Visiting Physician to St. Mark's Hospital, in an article entitled "The Newer Preparations of Bismuth," published in the *Medical News*, July 31, 1897, arrives at the following conclusions:

1. That the use of the organic in place of the inorganic bismuth compounds should be insisted upon.
2. That the **compounds of bismuth with betanaphtol, phenol, and tribromphenol, are remedies which produce practical intestinal antisepsis.**
3. That they are indicated in all gastro-intestinal fermentations and catarrhs until the symptoms are relieved, the dose to be determined by the severity of the symptoms.
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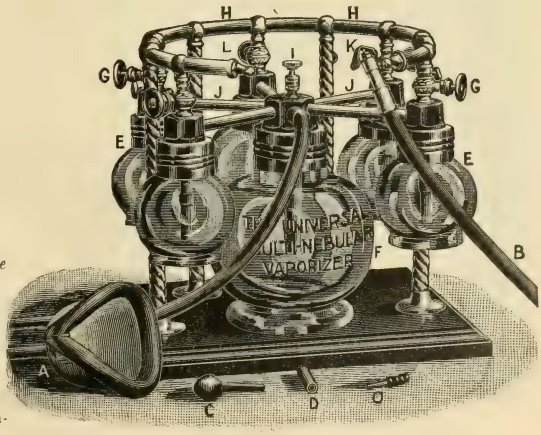

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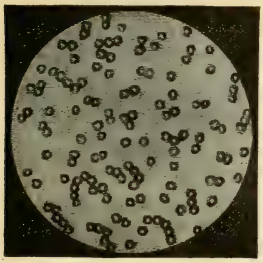

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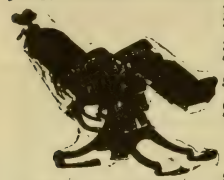

Fig. V.—Semi-Reclining.

1st. Raised by foot and lowered by automatic device.—Fig. I.
2d. Raising and lowering without revolving the upper part of the chair.—Fig VII.
3d. Obtaining height of 39½ inches.—Fig. VII.
4th. As strong in the highest, as when in the lowest position. —Fig. VII.
5th. Raised, lowered, tilted or rotated without disturbing patient.
6th. Heavy steel springs to balance the chair.
7th. Arm Rests not dependent on the back for support.—Fig. VII—always ready for use; pushed back when using stirrups—Fig. XVII—may be placed at and away from side of chair, forming a side table for Sim's position—Fig. XIII.
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Fig. XVII—Dorsal Position.

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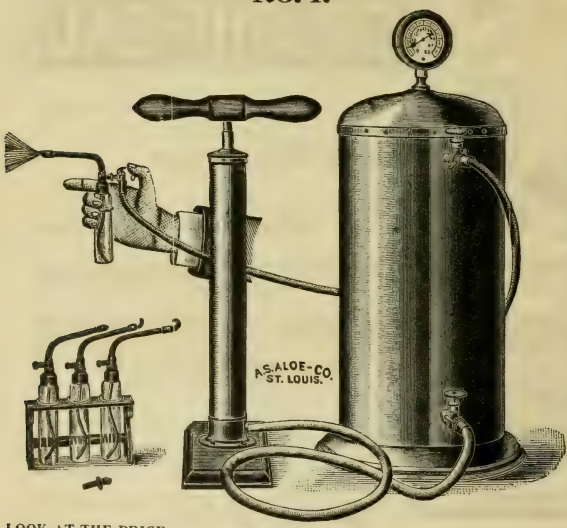

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The Charlotte Medical Journal.

VOL. XIII. CHARLOTTE, N. C., JULY, 1898. No. 1.

Post-Typhoid Hepatic Abscess.

By T. CATLETT GIBSON, M. D., Winton, N. C.

I have seen but very few reports of abscess of the liver following typhoid fever, though they frequently occur as sequel to dysentery, especially in the South.

During the winter and spring of 1896, I had a very severe and protracted case of typhoid fever in a man about middle aged and in reduced circumstances. Owing partly to the latter his general physical condition was much below the average, and it was impossible to secure the comfort and attention a trained nurse could have given him. So in a little log cabin, with only one room, which was sick room, bed room, dining room and kitchen, and only his wife to nurse him, he had to fight the severe attack of fever and then its sequel—hepatic abscess.

I will not enter into the details of the fever, but will say that, during the entire course of the disease there was an unusual amount of tenderness extending over the whole abdomen, but the typhoidal symptoms were so plainly manifested that a mistaken diagnosis could not have easily occurred.

The tenderness subsided with the fever, and when the temperature reached normal I thought my patient was entering convalescence.

The fourth day after the evening temperature reached normal there was a slight rise of fever, with chilly sensations. The following day there was a decided increase of temperature, and he complained of pain in his right side, especially on moving.

On examination I found tenderness over the lower portion of the right lobe of the liver and that it extended two inches below the costal margin.

Pressure with the end of the fingers revealed a very sensitive point about four inches to the right of the median line and just below the tenth rib. The complexion was sallow and slightly icteroid. The tongue coated brown and breath offensive. Respiration was frequent and shallow; deep inspiration causing pain.

A mild saline laxative was given and hot fomentations applied. On the following day tenderness over the hepatic region was more marked and he had the appearance of growing worse. Not being able to make a positive diagnosis I made an exploratory puncture with a long fine needle and hypodermic syringe.

The first puncture revealed the presence of pus. I decided to operate at once, by aspiration, before the abscess cavity could become enlarged, or before there was any possible risk of rupture into the pleural or peritoneal cavities.

Before operating the skin was thoroughly cleansed and a few drops of a one per cent. solution of cocaine injected into the integument. I obtained twelve ounces of pus, and then injected into the cavity that quantity of a weak solution of carbolic acid, and after the third washing the water returned free from the appearance of pus. A one per cent. solution of iodine was then injected and withdrawn, and a piece of gauze dipped in carbolized oil was placed over the puncture. The temperature the next day was normal and the symptoms rapidly disappeared. A week later there was a return of fever with all the concomitant symptoms. The pain was not so great, but localized. I repeated the operation and found about two ounces of pus, but not offensive like the first. There was no further return of fever and convalescence began from date of last operation.

Remarks on a Cure for Consumption.*

By DR. JOHN HEY WILLIAMS, Asheville, N. C.

A medical almanac would probably say—about this time look out for a new cure for consumption, however, I have nothing of the sort to offer, and am really in an atavistic mood. I recognize the fact that the whole medical world is on the stir to find some remedy for this great white plague. Each one of us knows that should a panacea be found, that the discoverer will be immortalized and that the wealth of the far Indies will be laid at his door.

The advent of serum therapy gave a renewed interest in the work, but, as we know, it is in a tentative and experimental state. We well know that as yet we have no specific, and wanting that we are con-

*Read before the Buncombe County Medical Society, May 16, 1898.

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strained to follow, somewhat, the old and well beaten track so long ago well blazed by our illustrious predecessors. In truth, I am coming to think that the lines upon which our forefathers worked will do as patterns for us in these latter days. It is true that we possess improved instruments of precision for purposes of diagnosis, and the researches of our biologists and pathologists have given us a broader and deeper insight into the mysteries of perverted nature, which after all is disease. Yet it is true that centuries of observation and experimentation brought our ancestors nearly up to the plane that we now occupy. We make no sudden jumps, but our knowledge of medicine is to day but the aggregation of the experiments of the thousands who have gone before us. The improved searchlights of to-day only make more clear and plain the result of their labors to which we are heirs.

From the earliest history of consumption, or tuberculosis, as we term it to-day, the dominant tone of the treatment has been the study of the complex feature of nutrition, and even to-day the remedies which find more general favor with the profession at large are those which tend to building up the impaired tissues of the body. The study of the principles and processes of digestion, assimilation and normal destruction of tissue in the human body, has been productive of much good in the therapy of disease. Theories as to such matters are as thick as leaves in Vallambrosa's vale, but there seems to be a stratum of similarity through them all. Years ago it was discovered that under the administration of creosote the condition of the patients now classed as tubercular was improved. At once there were enthusiasts who claimed that in creosote we had a specific, and after the famed discovery of Koch as to the association of the tubercle bacillus with the pathological condition present in diseases formerly known as consumption, scrofula, hip joint disease, white swelling, Pott's disease, etc., the conclusion was reached that in creosote alone did we possess a true specific, and its claims were lauded to the skies. Huge doses of the more modern preparations were given with the hope and expectation that corresponding results would be attained. But I think that the faith of some of our enthusiasts, like Bob Acres' courage, is oozing out. I think that in time the administration of creosote will find its true and rational basis. But you may say that this has nothing to do with Ichthyol. I think it has, in that I claim that Ichthyol possesses all the virtues claimed by the devotees of the creosote habit, and is free from some of its manifest vices.

It is now eight years since I first began the use of Ichthyol, and my attention was drawn to it by a small brochure from some German author whose name has slipped my memory. I had at that time a patient suffering from chronic bronchitis with a profuse purulent bronchorrhœa, with a general glandular involvement. I used the remedy in a tentative and experimental way, combined with cod-liver oil and syrup of iodide of iron. I was much gratified with the constant and steady improvement in the case, and she still lives, "a monument to my skill," etc., and is today in a very comfortable condition of health. My administration of the remedy was crude, and nothing but the fear of impending death would induce her to take it. I was encouraged, however, by the result attained to persevere in its use, and I soon learned easier and more palatable modes of administration. I found that by giving it in capsules one-half to three-fourths of an hour after meals it was deprived of its more disagreeable quality, that is, the regurgitation. I have now a record of several hundred cases in which I have used it largely, and I have secured favorable results in a large majority of the cases. My usage of the remedy has been based upon the fact the disturbances of nutrition has been one of the prime factors in every case that has come under my observation. Any remedy which favorably modifies the catabolic and metabolic processes necessary to a healthy condition of the tissues: appeals to me at once. I have learned that a healthy and wholesome digestion best serves our purpose in all such cases, and in Ichthyol I think I have found a remedy, in my practice at least, unsurpassed in the relief of the gastric and duodenal catarrh so common in such cases. I will not bore you with statistics, but will give you the impressions made upon me by the study of these cases to which I refer. I have found that as the appetite and digestive powers increased the daily average of temperature was lowered, the night sweats were lessened, and in the majority of cases ceased entirely; degenerative changes take place in the appearance of the bacilli, with lessened number and gradual disappearance, the character of the cough is much modified, the expectoration becomes much easier, the character of the expectoration changes from the tough, sticky and tumular plunks. It becomes more fluid and easier raised, losing its purulent character, and gradually decreasing in quantity.

"The value of Ichthyol in tuberculosis as a symptomatic and adjuvant of hygienic

measures is confirmed anew by Combemale, who has completely cured with it one case of "rapid consumption" and has used it with marked benefit in 120 cases of tuberculosis in the last year, in different stages. It is most effective in the torpid forms, and is counter-indicated and sometimes injurious where there is erethism or fever. It stimulates the appetite, favors the nutritive processes, reduces the cough and builds up the general health, while locally it is an efficient disinfectant. With one or two grams a day the sputa are liquified and disinfected; drying up with larger doses. It is usually administered in pills or capsules just before meals, one to three grains a day, suspended for awhile, or combined with two to five grains dermatol, if it produces diarrhœa, as occasionally occurs."

In my experience, however, I have not found it necessary to administer the dermatol, as in no case has it produced diarrhœa.

I do not wish to create the impression that Ichthyol is a specific in any sense of the word. I do not believe that at this day we have any specific. I only find that it has many excellent qualities as an alterative, and in my judgment alteratives and tonics are the best means with which to combat the various phases of tuberculosis. By means of improved digestion we furnish the tissues of the body with the pabulum necessary to the building up of good healthy tissue. Whatever means we may employ outside in the nature of serum treatment or the various tubercular extracts, or the neuclein products, for the purpose of improving leucocytosis and phagocytosis, increasing as it were the standing army of the body, will be of no avail unless we feed that army. Which is best, a small army well fed and equipped, or a large army with no supplies and ammunition? Just glancing at the serum-therapy for a moment: My impression is that the most it can do is to produce that personal anti-toxin which is antagonistic to the growth and development of the tubercular bacilli. Further than that I do not see how any one of them can go. You may ask me how does Ichthyol produce such results; what is the physiological law of its action. I answer frankly I do not know. I use it empirically as we all do most of the medicines employed in our daily practice. By means of its supposed power to constringe the capillaries in inflamed tissues I have been induced to use it largely in all cases of a hemorrhagic nature, and I fancy that I have derived more comfort from its use than from either ergot, or gallic acid, or any of the astringents. As a local application in all tubercular ulcers I find nothing is its superior. I have found great benefit also in its local application in laryngeal tuberculosis, where I have deep, ragged ulcers from breaking down of tubercular deposits. I apply it in full strength; and as a detergent wash. I use it in a 10 to 20 per cent. solution as a spray. Owing to the fact that it is not miscible with any of the hydrocarbon oils, I have not been able to use it in deep inhalations. I am convinced that I shall derive great benefit from it should I be able to devise a way to effect a solution or suspension in glymol or other bland and unirritating hydrocarbon oils. My favorite mode of exhibition is in capsules, beginning with a No. 2 capsule, raising to a No. 1 at the end of a week, and at the end of a fortnight I increase to a No. 0. In fact, two years ago I had a patient who was so little sensitive to its bad taste that she took for about three months a small teaspoonful three times daily dissolved in milk. I have noticed no bad effect in any way, except that after about six weeks usage of the larger doses there comes on a bronzing of the skin, giving a copper color to it. I am not as yet able to account for it. It soon disappears, and the skin becomes soft and clear, with a disappearance of the acne eruption so often noticed in the young. Of late I have combined with it the carbonate of creosote, given in capsules, equal quantities of each and I think that there is some advantage in its administration in this way.

I have endeavored, gentlemen, to give an unbiased report of my experience with the use of Ichthyol, and I desire to add that I am not wedded to it or any other remedy. I have striven to find the best. Should any thing better offer I shall give it a fair and scientific trial, noting from day to day the effect and the daily condition of my patient. There is too much of this jumping at conclusions that are not based upon a careful and exact scientific investigation. Anything short of this does not meet with the expectation of the leading professional men of the day, and savors too much of commercialism.

DISCUSSION.

Dr. C. P. Ambler.—I heartily agree with Dr. Williams when he says we have no specific for tuberculosis. I believe that the reason for that fact is very plain, too. There are very few cases with which we come in contact that are truly cases of tuberculosis, and tuberculosis alone. The majority of these cases are complicated, so it must hold true that we have no one drug which will act as a specific in cases of the complicated nature which we ordinarily find. I further agree with Dr. Williams in

hoping that if we are to have a panacea that it will speedily arrive and accomplish the result we look for. I do not believe that such a thing can exist, in the nature of the cases we have to handle.

In regard to the administration of creosote, I know that it is advocated by some of our best authorities, advocated in small and in large doses. Personally, I have almost quit the use of it. Dating back about six years ago, I believe shortly after the time it was first brought out, we gave it in small doses and increased it rapidly. We found that that did not do. We then began giving it hypodermically, and would give it from one minim to six and eight minims, several times a day. It is possible to give it in this way without any local irritation, provided certain precautions are observed. We found very little benefit this way. I believe after the drug was tried in almost every way for two years it was dispensed with. I find that if the creosote is persisted in for any length of time in anything more than the smallest doses it will upset the digestion, and I believe it is a fact that in the great majority of cases coming to Asheville, who have taken any quantity of creosote, you will invariably find that the stomach is more or less at fault. That may or may not be due to the creosote, because in this disease we always have more or less trouble with the digestion; in fact, as Dr. Williams has recently stated to me, I believe that tuberculosis and disordered digestion go hand in hand, and I do believe that disordered digestion stands close to the root of the evil.

Now in regard to the use of Ichthyol, I certainly believe that its use is justifiable where we have any stomach or intestinal disorders. I find that the patient, after taking it a considerable length of time, will have better digestion, he has less night sweats, less fever, and the pulse becomes decidedly better, I believe that the good results are not from the good effect of the drug on the tubercular deposit. We seem to get better assimilation, and this always means improvement in all of the general symptoms in tubercular troubles. In tubercular laryngitis the drug is beneficial for various reasons. It has astringent effects upon the blood vessels. I am not prepared to say that it acts as a germicide in the larynx. I have not used it in the spray, for the reason that I use very few drugs in tubercular laryngitis in the spray. I find that the only way we can get a drug to the tubercular ulcer is to apply it with a cotton wrapped probe. With this, in the first place, we remove the ulcer, then we are enabled to get the drug to the deeper tissues. I find that the application of ichthyol to the larynx gives the patient relief very often from dyspnœa.

I believe that the medical journals of to-day make a great mistake in publishing the reports of tubercular cases which are benefitted, or apparently benefitted, as they do. In almost any of our journals we can come across an article where Dr. So and So reports a case where such a patient has been benefitted by such a drug, but in my experience I find that in almost any case if handled carefully, and the hygiene is looked after carefully, the patient will improve, and I believe too often that we place this improvement to the drug which we apply. It does not follow, because our patient improves, that it is the drug which we are using that causes this improvement. I myself have been guilty in this with the rest. I have reported cases of tuberculosis that have improved upon certain drugs or under certain means and methods, and I believe that I am to be censured with the rest. Before we attempt to report a case as cured we should certainly wait till some time has elapsed. It is going to take at least one or two years to demonstrate whether we have cured our case. If we report it right away we may in a few weeks have to make a different report. I have before me a report giving a list of 180 cases of tubereulosis, and of these 180 cases a certain number were reported as cured or apparently cured. This number covered 28 per cent. of the whole number of cases. This 28 per cent. I have followed carefully. I have had the names and addresses, and I can say tonight that of the 28 per cent. which were reported apparently cured over half have had a relapse. This report was certainly misleading.

I have digressed somewhat from the subject. I am sorry I cannot say more in regard to ichthyol itself. My use of the drug has been somewhat limited. I have used it with good results, but I certainly do not depend upon it as the drug par excellence.

Dr. C. L. Minor.—I have tried ichthyol in a number of cases with a good deal of satisfaction. I find that on account of the excessively disagreeable smell and taste a large number of patients get up such a repulsion to it that they cannot take it. I have tried it in the usual way, in capsules, I have tried it with peppermint water and in other ways, and while I find it in a great many cases much more satisfactory than creosote, there are a certain number of cases where nausea is produced after a while, and the patient has to give it up. The point the doctor made about taking it three-quarters of an hour after meals I have not

tried, and that is doubtless wise. As regards the effect upon the nutrition of the patient, I agree with the doctor in all he says. Every one who treats tuberculosis recognizes the fact that digestive disorders, while not the cause of the disease, are very often the predisposing cause. If that is the case many of us turn our attention to increasing nutrition, and that is where I found ichthyol would help me. Nobody who treats the disease would believe that any such drug would have any specific effect, but drugs which can increase nutrition as it does certainly ought to be given a fair trial, and the form in which we administer it, I have always found, makes a good deal of difference.

Dr. C. P. Ambler.—I would like to know, in discussing the paper, if any of the doctors have had any experience in tubercular diarrhœa.

Dr. J. A. Burroughs.—I did not hear Dr. Williams' paper. I have given it in those cases, and am now giving it in Peritin coated pills and also by enemas, and I think with fairly good results. In other words, I believe it is as good a drug as we have in tubercular diarrhœa.

Dr. J. H. Williams.—I really have very few remarks to add to the paper which I have read. What I attempted to make the dominant tone of the paper I read is that the whole treatment of tuberculosis, although I did not touch upon that especially, hinged upon the hygienic surroundings and environment of the patient, and the question of nutrition, or rather of assimilation. It is not so much a question of the digestion of the patient; it is a question of the assimilation and the appropriation and storing away of the pabulum of the food that is offered our patient. As Dr. Minor says, in the pre-tubercular stage, where the child comes to us from parents that are tuberculous, or that have a tuberculous family history, in that case we have what I would call a tubercular tendency. In cases where you have this primary fault in the digestion, and the tissues of the body of imperfectly formed material, you have pabulum upon which the bacilli can grow and feed, and as a result of the growth of the bacilli we have all the symptoms of what we call a case of tuberculosis.

As to the remarks of Dr. Ambler about waiting a little while to see the effect of our drugs and treatment, I think there are many of us who are a little too rash, and run into print a little too quick. We think we have discovered a panacea, an absolute cure. If we would wait three or four years, and follow the history of these cases and look into the clientele of our neighbor down the street we would find that these patients whom we thought were cured are now patients of one of our competitors. They are still tubercular. We have secured an arrest; we have not cured the man at all. He is not cured, and he returns probably to the same condition and same environment that he had in the first place and he has a relapse. He does not come back to us any more because we told him he was cured. He does not believe us. So I think we had better wait two or three or four years and see what the effect of that treatment is.

In regard to the point made by Dr. Minor as to the administration of the remedy, and as to its being disagreeable, I think that depends somewhat upon the mode of administration, and having had eight years of use in it I think I have found the most practicable and feasible method of administering it. If given immediately before or after meals we find it excessively nauseous to people of delicate tastes, therefore I make it a rule to give it not less than three-quarters of an hour after meals. The ichthyol, being liquid, will pass on with the food to the small intestines, where we expect to find the principal benefit. So far as the local action upon the stomach is concerned, it is not particularly beneficial. In one or two instances I found it to be, but it is better to give it when the food has just begun to pass into the small intestine, and, as I said, the ichthyol being already liquid, passes on with it. If the patient is encouraged to take it, and is asked at the end of a week if the medicine is objectionable, he says he does not mind it. I have had some patients who are so little sensitive to the taste that they will pour out a teaspoonful and mix it in a glass of milk and drink it down.

In cases of tubercular diarrhœa I found I got nothing bad from it. I find that it has no effect upon the peristaltic movement of the bowels. It does not aggravate cases of tubercular diarrhœa, and in my opinion does act in a beneficial way, in that it acts as an antiseptic in the same way as creosote and carbolic acid, and things of that sort, and if I have had a persistent case of tubercular diarrhœa I have persisted in giving my ichthyol, and rather increasing the doses, giving if necessary a small amount of dermatol, three, five, six or eight grains, sometimes giving salicylate of bismuth, or some of the mild astringent preparations. I have found a deodorized tincture of opium, or the crude opium itself, administered with the ichthyol, to answer better to control the tubercular diarrhœa than any other medicine with which I am acquainted. Dermatol has been fairly successful with me, but

I would rather depend upon the crude opium, in connection with the ichthyol, than any remedies which I have used.

Delayed Union Following Fracture of Both Bones of the Fore-Arm, Numerous Operations.*

By IRVING S. HAYNES, Ph.B., M. D., Professor of Practical Anatomy in the Cornell University Medical College: Visiting Surgeon to the Harlem Hospital; Member of the New York Academy of Medicine, of the Bellevue Hospital Alumni Society, of the N. Y. County Medical Society, etc.

George P., 44 years, U. S., painter. History. On August 6, 1895, while painting a house the staging gave away, precipitating him to the ground a distance of about 30 feet. The sixth, seventh and eighth ribs on the right side were fractured near the sternum, and the left fore-arm, which was doubled up behind him when he struck the ground.

He was under treatment for eleven weeks the ribs united but the fore-arm did not. The patient came under my care on November 18, 1895.

Examination showed free motion at the point of fracture, which was at the middle and lower thirds of the fore-arm and included both bones. There was some swelling about the seat of the fracture due to the callus. The hand and the fingers were in line with the fore-arm, and all the wrist and finger joints were so stiffened by adhesions, due to non-use, as to be almost immovable to passive and absolutely so to voluntary motion. The man had always been in good health; his wife and children were healthy, and he denied ever having had any venereal disease.

On October 23d, 1895, ether was administered at home; the adhesions about the ends of the fragments were ruptured and the ends of the bone were actively rubbed together. The ankylosis of the wrist and distal joints was broken up, and the arm was put up in short side splints reaching to the wrist. Massage, hot and cold water to the hand. On November 11th, the patient could flex the fingers about half way. There was no union of the fractured ends of bone.

November 18th—Operated at home, Dr. Dearden assisting. Ether was administered by Dr. Gorman. The radial fracture was exposed by a three inch incision over the postero-external border of the fore-arm. The broken end of the upper fragment was enveloped in a small amount of callus increasing the diameter of the bone to three-fourths of an inch. The end of the lower fragment was atrophied and rounded off to a blunt point. There was only a little fibrous tissue between the fragments. The periosteum was peeled up and about half an inch of the ends of the fragments was removed by the saw. The ulna was exposed by an incision over the postero-internal border of the fore-arm. A similar condition was found as in the radius. The same amount of bone was remoevd. The cut ends of the upper fragments looked normal and bled freely; those of the lower fragments showed a very thin shell of bone with decrease in size and fatty degeneration of the interior. The fragments were drilled and fastened together with heavy floss silk, the wound closed and sealed with collodion.

On January 1st. 1896, there had been no attempt at union of the fractures. The patient was admitted to the Harlem Hospital. Under anæsthesia the fragments were exposed a second time by incisions through the first scars. They seemed to be the same condition as at the first operation. That is the upper fragments were able to produce bone but the lower ones were not able, on the contrary they had suffered loss of substance. The former silk sutures were removed and the ends of the fragments were freshened; they were not wired but were left free, trusting to the application of a plaster splint involving the entire upper extremity to hold them close together.

In May there was about half the normal movement in hand and fingers. No union at fracture. There was pain in the thumb and index finger due to a spur of callus on the anterior surface of the radius pressing on the median nerve. Under ether an incision was made over the swelling and the projecting mass of callus removed. The pain ceased and did not return. A laced leather splint was fitted to the fore-arm and the patient instructed to use the member as much as he could in light work in the hope that such irritation might lead to some result.

December 3d.—The patient has faithfully carried out instructions and secured about three-fourths normal range of motion in wrist and fingers. He has been able to do a little light work with the fore-arm. There is, however, no union of the fracture, and a Rœntgen skiagraph shows the ends of the bones smooth and rounded off with

*Case presented before the Surgical Section of the Academy of Medicine, March 14, 1898.

a distinct gap between them. The patient was readmitted to the Harlem Hospital.

December 5th.—For the fifth time the patient took ether, for the third time an operation on the bone was attempted. The fragments were exposed by incisions close to the former ones and the ends freed from periosteum and fibrous tissue. The fragments were beveled off by a saw so that the cut surfaces of the bones were fully one and one-quarter inches in length, and the bones when brought together lapped for this extent. The line of the saw-cut was from above downward and backward. The attempt being made to keep the sawed surface of the fragments in the same plane with each other when the fore-arm was supinated. The bared surfaces were placed together, a drill was passed through their center, two strands of medium silver wire were drawn through the hole, one strand being twisted on one side and the other on the opposite side of the fragments. After the wires were tightly twisted the fragments were held firmly together, and as we had been fortunate in making the saw-cuts they came into direct alignment. The incisions were closed and sealed with collodion. A plaster splint was applied from the middle of the arm to the palm of the hand. Four days later the temperature went to 101.8 F. The incisions were exposed, the swelling was due to effusion, a few sutures were removed from both giving escape to bloody fluid. The ulnar incision healed promptly, the radial presented a small sinus.

May 1st, 1897.—There is solid bony union between the fragments. A small sinus in the radial wound leads to the silver wire, which can be felt with the probe. Under cocaine the sinus was enlarged and the wire was removed.

May 8th.—Sinus not healed. Cocaine used to enlarge sinus sufficiently to remove wire on the inside of the radius. The sinus promptly closed. The patient has so far regained the use of the fingers as to be able to hold a pencil. He has a good grip and strength is returning.

January 1898. A small, fluctuating swelling formed over the anterior surface of the radial fracture. This was opened and small spicula of bone removed.

March, 1898.—Present state: Is janitor of church. Says that he can use the arm nearly as well as before fracture. Can wheel a barrow with a load of 300 pounds with ease. There is shortening ($2\frac{1}{8}$) two and seven eighths inches. Pronation and supination about two-thirds normal.

1125 Madison Avenue.

Typhoid Fever and Its Treatment.*

By Dr. E. C. Starnes, Asheville, N. C.

Typhoid fever is a specific infectious disease, sporadic and epidemic; it is communicable from the stools, and is characterized by lesions of the intestinal glands and spleen with the constant presence in them of the bacillus of Eberth and marked clinically by a variable febrile course which lasts three or four weeks with cerebral, abdominal and pulmonary symptoms, with a tendency to restoration to health after slow convalescense. Typhoid may be found in all climates, especially prevalent in the temperate zone, although met with in winter and spring, it is especially frequent throughout the latter summer and fall months. It seems more prevalent after a hot dry summer. Typhoid is not contagious in the common acceptation of the term, as there are no exhalations from the lungs which can impart the disease. The infectious product is contained in the discharges from the bowels, and more rarely the matters vomited, or expectorated. So it is admitted that those who handle the discharges or the soiled linen may acquire the disease.

SPECIAL SYMPTOMS.

The general condition and appearance of the patient, the expression of the face, in typhoid fever is characteristic even in the beginning. There is a drowsy listless appearance, with heavy eyes. If headache be severe or fever high at the onset, the expression at the time may be excited and anxious, the eyes bright and pupils dilated. In mild cases there may be very little change at any time. When the disease is fully developed, if of ordinary type, the patient lies quiet, more commonly upon the back, with eyes often closed, with a peculiar sleepy and heavy expression, unless there be active delirium, when jactitation may be marked. The face is often pale, or there may be a circumscribed flush on one or both cheeks. If confined to one cheek it indicates a higher degree of congestion of the corresponding lung. The flush comes and goes and is often made worse by the administration of food and stimulant. The general strength of the patient is usually prostrated from the beginning. In grave cases the weakness becomes so extreme as the disease advances that the patient lies perfectly helpless on his back, or will slide down in bed. On the other hand, in mild cases, there is very little prostration and the patient may be able to rebel against confinement to bed.

*Read before the Buncombe County Medical Society, June 6th, 1898.

The patient under my charge, Mrs. M—, complained for two weeks, and had no attending physician; felt able to attend a circus, was taken with a severe hemorrhage, on the following day had a hemorrhage, and three days in succession. Emaciation frequently becomes great, or even in the extreme in cases which have lasted for several weeks. The skin is often persistently hot and dry throughout the whole course of the disease. Frequently more or less sweating occurs—may be sudden flushing or outbursting of sweat.

Typhoid has its characteristic eruption, and often demands close study, as upon it the diagnosis in many cases may depend. It consists of isolated, round rose colored, slightly elevated spots, which first appear usually on the seventh or eighth day of the disease, while they may make themselves visible in successive crops. They are, as a rule, found on the upper part of the abdomen and the lower part of the chest, however, are not always limited to that region. Sometimes they appear upon the sides of the trunk and on the back and even the extremities. In my experience the greater the rash the more severe the disease. The temperature record of typhoid is, as a rule a clear one. The fever on the morning of the first day may be stated as $99\frac{1}{5}$ deg. F.; evening, $100\frac{1}{5}$; second morning 99; evening $101\frac{1}{5}$; third morning $101\frac{1}{5}$; evening $102\frac{1}{5}$; fourth morning $101\frac{1}{2}$, evening $103\frac{1}{5}$, and fifth evening $104\frac{1}{5}$. From that time until the end of the second week the evening temperature varies between 103 and 105, morning temperature being one or more degrees lower. The third week the fever begins to fall gradually, but by more irregular steps than it has showed in the initial rise. In a typical case the evening exacerbations are for a time as great as before, but the morning remissions become daily more marked. Very soon the evening maximum also begins to grow less by about one-half degree while the morning remissions are still more decided. The evening temperature continues to fall gradually and with regularity until normal is attained, about the twenty-eighth day of the disease. The temperature possessing these features may be regarded as a type. It must be understood that there are many variations, and that a typical temperature chart is not often seen.

HEADACHE—NERVOUS SYMPTOMS.

It occasionally happens that throughout the course of the disease the mind will remain clear; special senses almost normal. Headache is one of the most frequent symptoms of typhoid fever. As a rule most in occepital and cervical region. At times extends anteriorly, may be so violent as to arouse fears of meningitis, especially when combined, as it sometimes is, with retraction of the head, twitching of the muscles and other symptoms; also vertigo. Delirium in some sort may be observed at times in the majority of cases. The wandering delirium may alternate with at periods somnolence; on the other hand there may be an outbreak of noisy delirium, which are attended with efforts to leave the bed, which make forcible restraint necessary.

Digestive symptoms are numerous. There is no other disease in which an anorexia is more marked or persistent. It is complained of during the initial stage and lasts until convalescense begins. It may be only an indifference to food and not an actual aversion. It is generally possible to admit a fair amount of nourishment, especially in the form of milk or light broth, which has no decided taste. Nausea sometimes occurs, especially at the beginning, but is not common except excited by injudicious feeding or medication. Later in the disease vomiting is more rare. The morbid irritability of the stomach is at times marked, and I have seen violent nervous symptoms, even convulsions, produced by the use of solid foods. The tongue is often seen enlarged and flabby, not rarely marked by the teeth around the edges with whitish, yellowish coat; edges are generally red. About the middle of the second week it may lose its coating entirely or in spots and become bright red, dry, clean, glazed and sometimes fissured. More frequently grows brownish, especially in the centre, and finally becomes coated all over with a thick cracked brownish coat which renders protrusion very difficult. At the beginning of convalescence becomes gradually more moist and the crust is slowly gotten rid of.

Tympanites is a very frequent symptom. Generally developes the second week. It varies in degree from slight to extreme distension sufficient to interfere with breathing and the heart's action and causing great distress. Generally marked in cases, especially if diarrhœa be a prominent symptom. Diarrhœa must be considered one of the important symptoms of typhoid; may be one of the earliest manifestations of the disease. The stools are at first dark, but early in the second week become fluid, offensive, ochre yellow in color like pea soup, often streaked with blood; as a rule the stools number from three to sixteen in twenty-four hours.

Hemorrhage is a frequent complication in typhoid and may occur from the fourteen to the twentieth day. There follows a sud-

den decline of temperate to normal or below; precedes the passage of blood by stools; this is due to the erosion during the ulcerative action.

TREATMENT.

As yet I have been able to find no specific for typhoid. Chiefly symptomatic and expectant, with intelligent nurses, pure air and quietness. Produced as it is by specific germs it is evident that the object in prophylaxis is to destroy the germ wherever known to exist and to adopt every precaution against its admission to the system. In each case of typhoid fever the fæcal discharges which contain the virus in abundance must be thoroughly disinfected and properly disposed of, and cause for source of initial case should be sought. Drinking water and milk supplies especially offer themselves as most probable source of infection.

In the general management of a case of typhoid careful attention does much to determine a favorable result of the case, in this it is thought a good nurse without any doctor is far better than the best doctor without a good nurse.

The sick room should be as large and airy as possible; it should be kept clean and well ventilated, of course allowing no strong draft. The use of screens is to be advised, both to guard against currants of air and to aid in softening the light of the room. The bed should be neither too hard nor too soft. Feathers should be excluded. Preferably a woven wire mattress, covered with one of hair. form one of the best beds. Rubber cloth should be spread beneath the sheet, since much care is required to guard against the formation of bed sores. Complete rest in bed essential from the very first or suspicion of typhoid arises and kept in bed until close of the case.

DIET.

The diet is also of great importance. It should be from the start a liquid and easily digested. In most cases milk answers the requirements better than any other article. In many cases it serves the only article of food needed throughout the course of the disease, as it is readily digested by most persons and has a favorable effect in gastro-intestinal catarrh. Its relation to hepatic and renal activity are favorable. One and one-half to two quarts in 24 hours is the proper amount for an adult, given at intervals from two to three hours. Care should be taken not to give more than can readily be digested; this can be determined by watching the symptoms or increasing of diarrhœa, or of curds or fat globules in the stools. It should not be forgotten that food should be perfectly digested in fever just as in health. As all in opposition to the digestive power are doubly injurious.

Milk may be given raw, boiled, hot or cold—peptonized mixed with lime water, according to the case. It is a mistake to consider milk the only suitable article of diet, especially when a tendency to diarrhœa exists. In some instances it tends to produce constipation, and may even form such hard masses of curd in the stomach and intestines that it becomes one of the most solid foods. If this difficulty cannot be overcome by peptonizing or mixing with lime water, some other nourishment should be substituted, such as broths, soups of mutton, beef, chicken, or white of an egg mixed with stimulants, is valuable at times. So is beef juice, liquid peptonoids, and other preparations such as are on the market. The patient should be convalescent for ten or twelve days before a gradual return to solid food is begun. As I have repeatedly observed, alarming symptoms, even convulsions, so closely connected with the ingestion of even minute amount of solid food, so it is impossible not to regard it as directly caused by the food. In addition to liquid foods water should be freely given, though the patient's perception of thirst be often blunted as not to ask for water, yet they will take it if offered. It is important that small amounts be given at short intervals. Carbonized waters, cracked ice and lemon juice is always an agreeable change.

In every case of Typhoid, at some stage of the disease the consideration of the administration of alcohol comes up. In mild, uncomplicated cases especially in young, healthy and temperate subjects stimulants are not needed so long as the disease follows a typical course. Here, as elsewhere alcohol should be avoided when not absolutely demanded, both because it may irritate or disagree, and because its use may tend to establish a habit. However, the dangerous tendencies to exhaustion from various causes, in a majority of cases requires its use, especially in the latter part of the disease. One indication for its use is the inability to administer enough of food. In some cases, owing to nausea, it is impossible to have enough food taken to support life until the disease abates. Under such circumstances I would give small amounts of whisky and brandy in carbonated water or in milk. This aids in maintaining the circulation till the crisis is past.

Again, the existence of high temperature often makes it necessary to stimulate. In nervous exhaustion and heart failure it is necessary to use alcohol for its immediate effect. The amount to be administered will

vary with the needs of the case, and unless the symptoms are urgent it is best to begin with small, and diluted doses—from two to six ounces of whisky daily may be called a moderate amount, while eight to thirteen ounces in complicated cases should not be considered too much. In my experience, if the delirium grows less, the pulse grows stronger, and the tongue less dry, under the use of alcohol, I consider the remedy as doing good, but if these symptoms should become aggravated, then the consideration would be as to whether too much alcohol was being given. One of the most important indications which must be met, in the great majority of cases of typhoid, is that of the reduction of temperature and to what point the fever may be allowed to go safely without interference, and have we any means at our disposal if it threatens to overstep that limit. Our knowledge of the natural history of typhoid shows that the disease tends to recover in the great majority of cases, though the temperature reach 102 or 103 degrees F. The normal mortality of the disease if allowed to run its course simply with proper food and good care is altogether too high to be satisfactory, and it is being more clearly made out that a large proportion of this mortality comes directly or indirectly from the baneful influence of pyrexia. This statement has been confirmed conclusively by the remarkable results in a large series of cases, by keeping the temperature down below the lowest degree above mentioned—that is below 102 degrees. I am of the opinion that the only way in which this can be done safely and effectually is by the external use of cold water. We find various modes of applying it. They vary in efficiency and value.

We have in these the repeated sponging of the surface, the ice cap to the head, cold water pack, cold affusions, Leiter tubes, graduated bath, etc. In mild, and even in ordinary cases, sponging the entire surface of the body with cold water as often as the temperature in the mouth reaches 102 deg. F. is distinctly valuable. The sponging may be kept up for ten minutes or more and repeated as often as two hours if necessary, or as often as necessary. Friction and gentle kneading of the surface should be combined with it. The temperature may be reduced one or two degrees F. in this way. Of course the fever will rise again, but the process is not fatiguing to the patient. A thin rubber bag may be filled with cracked ice and applied to the head as necessary in the case. The cold pack, as it is a much more powerful anti-pyretic, is more applicable in high temperatures—say 104 or 105 deg's. F. The bed should be protected by a rubber cloth, and the patient, with the body clothing removed, wrapped in a sheet wet with cold water. The surface is then rubbed briskly through the sheet and from time to time cold water should be sprinkled over the sheet to keep it wet and zero cold. Very high temperature may be dealt with effectually in this way, but the process is tedious and troublesome. The friction during the pack should not be overlooked.

In addition to the external use of cold water we have other antipyretic remedies that may be used in conjunction with hydrotherapy or even in certain cases to its exclusion. However, serious harm may be done by the excessive use of those drugs which possess the power of reducing temperature under the mistaken idea that this result is sufficient to their value in the case. Antipyrine. phenacetin, and acetanalid are the most powerful and reliable drugs of this class; while they reduce fever remarkably they are usually well borne by the stomach and often exert a decided quieting action. The ordinary objection to them is that they are given in too large, and too frequent doses so that often depression of strength and even fatal collapse will follow. This is true throughout the disease, but particularly so in the latter stages when greater variation in the temperature naturally occurs. It is not so much that these drugs are so depressing to the heart for they seldom cause cardiac symptoms when they are given in febrile conditions, but it appears that in fever they affect the nerve centers so that an artificial crisis is produced, and in all crises danger of severe depression and even collapse arises. With the proper precaution these remedies are of great service. They are not required in mild form with moderate fever. Their use arises when the temperature reaches or passes 103 degrees F. If hydrotherapy is to be used systematically only occasional doses of these drugs will be required, the amount given always small. Five grains antiprine, and less phenacetine, should be given, the object being not to cause a great fall in temperature; it is enough if one or two degrees is secured. It often happens that this reduction lasts considerable time so that only a few doses at long intervals are required.

The catarrhal and ulcerative lesions of the intestinal mucous membrane are constant in greater or less degree, as they are part of the specific process, and therefore much less amenable than if idiopathic. There is evidence, however, that these lesions can be favorably affected by suitable remedies, if administered from a very

early period of the disease. If this can be done the secretions will be improved, digestion will be assisted and intestinal asepsis promoted indirectly. It may be doubtful whether the so called antiseptics which have been recommended in typhoid fever can be given in amount sufficient to disinfect the whole mass of the intestinal contents, yet it is not improbable that the surface action may account for a considerable part of whatever good they do.

Upon the whole we feel anxious that a remedy of this class be given in all cases of the disease. Due care should be taken which one is adapted to the condition of the stomach and bowels and our judgment should be used as to which is most appropriate in each case. The list from which choice may be made is a large one so that the special indications of each may be met and in this list may be mentioned calomel, nitrate of silver, the mineral acids, turpentine, iodine, carbolic acid and salol. In my experience favorable results follow at the beginning with calomel, grains five to ten, so as to completely unload the bowels. On the second day, if nausea continues, the dose should be repeated. If the stomach is still irritable the following solution, or

℞	Argenti nitratis	Gr. ii.
	Aquæ distillatæ	Oz. 4.
M.	Ft. sol	

A teaspoonful on an empty stomach every four or six hours. If painful one or two drops of tr. of opium may be added. This is given purely for a surface action just as it would be given for intestinal catarrh. My own belief is that this remedy so administered is a safe and useful part of the regular treatment of typhoid fever and that when begun early will, to some extent, prevent the development of serious symptoms and intestinal complications. I have often used the mineral acids. My favorite is the nitro-muriatic dilute. I think it valuable for its surface action, and as an antiseptic. I found it more useful when the tongue has a heavy yellow coating. The tongue not dry and the abdomen not greatly distended, and when bowels are quiet, with considerable thirst. Turpentine is, in my opinion, of unquestionable value in certain cases, while it has powerful antiseptic value and is a good stimulant. Its action on the mucus membrane in properly selected cases is excellent. The symptoms which call for its use in preference to the other remedies in this class are a dry brown tongue, with tendency to sordes, abdominal distention, without much diarrhœa, bronchial catarrh, cardiac and muscular weakness. I venture the assertion that no one could have given this remedy in suitable form and dose under the above conditions without sometimes observing as I have done repeatedly such prompt and positive improvement in all the symptoms as only could be attributed to its action.

℞.	Ol. terebinthinæ,	f℥iij ;
	Pulv. acaciæ,	
	Sacchari	aa q. s.
	Sp. lavandulæ comp.	f℥iij
	Aquæ	q. s. adf℥vi.

One to two teaspoonfuls every three hours. If the stomach is irritable it is well to reduce the dose of turpentine—add one or two drops of deodorized laudanum. During the course of treatment if constipation should appear one of the most safe laxatives will be found in minute doses of calomel—say one-tenth grain every two hours may be used until a single movement is secured. A mixture of two parts tincture of iodine, one part of carbolic acid has also been recommended to produce intestinal antisepsis. One to three drops of the mixture may be given three times a day. In my practice the results have not been satisfactory. Headache may be best managed by strict quiet and darkening of the room. Cold may be applied to the head, or menthol, chloroform liniment, camphor, may be appled locally.

The diarrhœa, the frequency and size of the stools, should be taken into consideration. As a rule it is not necessary to interfere if the movements do not exceed three in number daily and are not very large and liquid. The stools should be inspected in order to determine whether undigested food is passing or not, and if so the diet should be modified before remedies to check the looseness are given. Beef tea or other strong broth may increase tendency to looseness. When that exists milk properly diluted might take its place. When digestion is poor and the stools are frequent the following may be used with advantage.

℞.	Bismuth subnitrat.	ʒlij
	Pepsin saccharat.	ʒii
M.	Chart xx.	

One powder every three or four hours.

Often bowels are tympanitic from a paretic nature, due to degenerative changes and weakness of the muscles of the abdomen and of the diaphragm. In other cases it is due to excessive development of gases in the intestine from decompositon of food and a morbid secretion; when due to the latter and where a more rigid restriction of food and small repeated frequent doses of turpentine or thymol, mild laxative doses of calomel, in some cases small doses

of castor oil in emulsion, together with the external use of turpentine stupes are of great benefit. If the distension seems due to weakness of the muscles an increase of stimulants may relieve it. With this may be given full doses of strychnine, by the mouth or injected hypodermically in the abdominal walls. Also enemata containing turpentine and asafœtida are very valuable —as a last resort the rectal tube.

Should hemorrhage occur hypodermic of morphia should be given at once, ice, or cold, applied to the abdomen and perfect quiet insisted upon. If attended with great collapse, should be treated as in any other case.

Weakness of the heart or heart failure should be guarded against by systematic reduction of temperature, the use of alcoholic stimulants and of strychnine in full doses. I wish to lay special stress on the systematic use of strychnine in moderate doses when there is a tendency to cardiac or respiratory failure, and in large and oft-repeated doses hypodermically when such failure is imminent. In the convalescent stage, as is stated before, the gradual return to solid foods should not be within ten or twelve days. Systematic feeding should follow until return of health. No excitement should be permitted; tonics, such as iron, quinine, and strychnine, often cod-liver oil is useful—stimulants could be used to advantage.

DISCUSSION.

Dr. M. H. Fletcher.—Notwithstanding we have had frequent discussions of typhoid fever I do not know any subject which ought to be of more interest to us, and I have listened with great interest to the doctor's paper. He has steered so close to the centre line there is not much with which you can take issue. The doctor speaks of the characteristic face. In a typical typhoid fever we do have characteristic typhoid face, but in most of the typhoid fevers we have we do not see the characteristic face, and my experience is that it is not worth much as a diagnosis. My experience is that where there is the characteristic face there are other well developed symptoms which had better be relied upon for a diagnosis.

In regard to eruption, my experience is you will find it once in 20 cases, In almost every case of typhoid which has been contracted east of the Piedmont section, and brought here for treatment, you will find eruption, but there is seldom eruption in the typhoid contracted in this section.

I don't know whether I understood the doctor in regard to a temperature in the beginning of the case of 95 in the morning and 101 in the evening. I would say this, that unless there is some other factor at work I do not believe you would have a subnormal temperature at any time in typhoid fever. In typhoid you have a continued fever, and in the beginning if you have subnormal temperature you have some other factor at work.

I was taught for a long time, and followed up the idea, that the tongue indented with the teeth and the white tongue was due to acute gastric catarrhal fever. I don't know what gastric fever is, but the nearest definition I can find is acute gastric catarrh with fever, but lately I have changed my base, and you do have the tongue the doctor referred to, a white tongue which shows the indentation of the teeth, although the books do not speak of it as a typhoid fever. Of course we will agree that the preventative treatment is the treatment for typhoid.

In regard to the milk, I think the doctor's idea is good. He speaks of two quarts of milk, but I think there are few patients who can digest that much. I think we should better be on the other side, and give too little rather than too much. I had an idea that boiled milk had almost entirely been discarded.

In regard to the use of stimulants, I would say that you do not need a stimulant in typhoid fever unless you need one very badly, and when you do need it you need something better than alcohol. Now the doctor is very correct when he says that whiskey will quiet the nervous system, and very often does, but if you have a heart that is played out don't trust to alcohol, take something that can be relied on and from which the effects will be better, and you have that in strychnine. I certainly would not rely on alcohol in heart failure.

In regard to the temperature, I don't think you can lay down any rule. There is one thing certain, if you have a temperature of 104 or 105 to start with, if you expect to control it you have to resort to something more than sponging, and I think the doctor is correct that the way to control that is by cold applications. In a number of cases you have to put them in a plunge bath, and you have to be pretty well supplied with intelligent nurses, or you are going to do your patient damage. I think in the next few years that the treatment of typhoid fever will consist of cold water, internal and external, and just as cold as the patient can bear. Some of us who started this treatment several years ago know what opposition we had to meet. I knew a doctor to go into a town and tub

one or two patients, and maybe lost the first patient, and he had to leave that town. Things like that could not happen now, because the people are getting educated up to that kind of thing, and I believe it is the proper treatment. It is hard to carry it out, and most of us who treat among the poorer class cannot get it carried out. We can insist on them using cold baths, cold sponging and ice baths, but in a number of cases you cannot keep the temperature down by that.

I had an idea that the use of antipyrene and ascetanilid had been discontinued entirely. I have not for the last few years heard any one advocate the use of coal tar series to control temperature. In the beginning of typhoid, I use phenacetine to control the severe symptoms that you some times have, but ordinarily you do not have high temperature at that time. I do not agree with the doctor in regard to the use of nitrate of silver. You do not get a surface action from it, but where you do not want it. It is on the stomach. The doctor speaks of controlling that with opium, but whatever is done is on the stomach, and I think if you have lesion in the stomach you might be justified in using nitrate of silver, but certainly not to expect it to reach the lesion in the intestines.

We have had a number of discussions in regard to turpentine. I suppose there is no use to thrash over that old straw again. There is no doubt that turpentine is an antiseptic. If you could saturate your patient's system it is all right, but you cannot get enough in him to do any good. For certain conditions of the tongue, I would say a brown, dry tongue, turpentine does moisten the tongue, and you can get a beneficial effect, and for certain other symptoms we all know the benefit of turpentine.

I think the doctor lays too little stress on the rectal tube. I believe in the use of high flushings. I have my patients to use high flushings every day. I think it tends to relieve whatever is in the lower bowels, and has a good effect.

Those are the only things I wanted to discuss. I want to call the Society's attention to a thing we lay too little stress on, and that is leaving explicit instructions with the patient in regard to disinfecting of typhoid stools. Perhaps you all know that there is a State law in North Carolina that makes a doctor liable to a fine of $50 if he fails to give explicit instructions in that direction.

Dr. S. C. Starnes.—If I said a temperature of 95 I made a mistake. I meant to say 99. I did not mean to begin with a subnormal temperature.

Dr. J. H. Woodcock.—I wanted to say that I appreciate the paper very much, and think it is an excellent paper.

Dr. E. B. Glenn.—I wish to say in reference to the use of alcohol that I think a little of it throughout the attack is of value. It preserves the strength of the body, and acts as a food. It used to be considered that it retarded digestion, but on account of its stimulating by irritation more digestive fluid is poured out, and more food taken. I believe that alcohol is especially indicated whenever it lowers a temperature, causes a moist tongue and moist skin, and lessens delirium.

As to the use of turpentine, I believe it is a valuable remedy in the latter weeks of typhoid. I believe it has some effect to heal the ulcer and also lessens the tympanites which is so frequent in that period of the disease.

I believe the diet should be milk in all cases where it can be tolerated, because it is well known that the typhoid bacilli grow to a limited degree on milk, while on broths and soups it multiplies much more rapidly. As for any specific in the treatment, there is none. I do not believe that anything can be given to shorten the attack of typhoid fever, and the only way any remedies shorten the attack is in lessening the number of complications. Of course if you lessen the liability to hemorrhage and pneumonia you lessen the duration of your case, but I believe that every patient should be put immediately to bed when suspected of having typhoid fever, and kept there until it is determined whether it is typhoid fever or until he has recovered. It has often been said that a patient with typhoid fever is like a ship at sea; storms cannot be stopped, but it can be taken care of until the storm is over.

Dr. J. A. Watson.—I have listened with great interest to the doctor's paper. It certainly shows observation on his part in stating his case, and his treatment is in the main what I could approve of.

I have only this to say in regard to bathing. I remember very well when the treatment was first advocated in this country about twenty years ago, I adopted the full length bath as a remedy to reduce temperature, and I recall very vividly what a shock I got after putting the patient in the tub. I had my patient carried out and put in a tent. I thought I would give all the fresh air needed, so I took the patient out and put her under a shade tree in a tent, and in an adjoining tent I had a bath tub with water of about 20 degrees. My patient had a temperature of about 105. I allowed the patient to remain in the bath probably

five minutes, and I then put a thermometer in the patient's mouth and looked at my record and it was up to 110. Well, I didn't know what to do. I was not prepared for any such change, and I hustled my patient back to bed and administered some stimulants, and in about ten minutes I took the temperature again and I found it was down to 102, as well as I recollect. I began to think about the thing, and got a little more courage, and when the temperature went back I put the patient in the tub again, and again took the temperature by the mouth, when the patient was in the tub, and found the temperature had gone to 108 or 110 again. I continued my baths, and finally got my patient well. I concluded that the cause of the high temperature at first is that the blood is all driven to the internal organs, and possibly some irritation upon the heat-losing centres accounts for the rising temperature, which is not followed by any danger. After the patient has gone back to bed the high temperature is lost. I do not know whether any gentleman has had experience similar to that in using baths.

I never have been able to control temperature in fatal cases, ice baths, cold water or anything. I had two cases die in the hospital last year. I kept them covered with ice, and I never got the temperature down to 105 by the mouth in five days at a time. Unless the temperature is persistently high I think the patient will do quite as well, probably not as comfortable, as they would where we are constantly reducing temperature.

Dr. M. H. Fletcher.—I think I can readily understand that when you apply the cold you drive the heat from the centre to the circumference, and the rapid evaporation will drive the heat to the tongue. I have not used so much ice in typhoid as I have in sunstroke. If you keep it on, and the patient lives, you bring down the temperature.

Dr. F. T. Meriwether.—I would like to say a few words about the surgical treatment of typhoid. Until 1887 no one had the nerve to operate on a case, yet it had been suggested several times before that, but since then Finney has collected 52 cases, with 17 cases recovered. Since then one more recovery has been added. Of these he eliminates four, making 48 cases, with 18 recoveries. Of course the objection is in the third and fourth week the patient is very much depressed with lower temperature. I have seen two or three cases in very distressing circumstances, one death, the other got well. The perforation occurs in one or two per cent., and from the mortality rate probably six to eight per cent. can be said to die from perforation. It seems to me that an operation which will save one out of three cases, even though the patient be in very depressed condition, and even though we think the operation is not going to save his life, is certainly justifiable. The operation, of course, is nothing but the ordinary operation for the perforation of the intestines, which might occur anywhere else, but I think 80 per cent. is said to occur within two feet of the iliac valve.

Dr. C. V. Reynolds.—I have enjoyed Dr. Starnes paper very much, and had several points to discuss, but Dr. Fletcher has so well and carefully eradicated everything that it does not leave much to say, though I would like to take issue with the doctor on one or two points. One is in boiling his milk. I think he recommended boiled milk in the treatment of typhoid fever. It seems to me in typhoid fever you should treat the patient like an infant relative to the digestion, and when you boil the milk you throw down a precipitate which makes it much harder to digest than the natural milk, or if you stop this side of the boiling point, this precipitate is not thrown down, and the milk is easier digested.

In regard to calomel, I agree with the doctor fully in giving five grain doses at the beginning of the disease, but as to repeating that in the five grain dose a day or two afterwards I object. It seems to me after he gives the five grain dose, it is best to repeat with one grain dose of calomel for its tonic and antiseptic effect, especially on the liver and small intestines, and follow that by a broken dose of salts, that he would have a better result. I heartily agree with Dr. E. B. Glenn in his use of turpentine, especially in the latter part of typhoid fever. Giving the turpentine with turpentine emulsion always acts very nicely on the bowels, and it has remarkable effect in cleaning off the tongue, outside of the antiseptic action.

Relative to alcohol, it seems to me that after you have your patient advanced two or three weeks, and he begins to get a little weak, a moderate dose of alcohol is one of the best diffusible stimulants we have. It opens the pores and relieves the nervous system, and reduces the fever, outside of the tonic effect. I think he is giving the alcohol more for the tonic than the stimulating effect, and in the latter stages, as the doctor refered to, strychnine in large doses is the best treatment.

As to operating, as Dr. Meriwether says, I remember some doctor reported two or three cases where he had operated, and I think he saved one out of the three; but when you have perforation it means death,

and if you can save one case in five hundred you cannot do any harm, and if you can save a life you have a star in your crown. I say operate every time when you have perforation, for the last resort.

Dr. C. P. Ambler.—I would like to say a word in regard to the digestibility of milk. I believe it is a settled fact that boiled milk is constipating. Now if food of any kind is indigestible is that food constipating, and why if boiling milk renders it constipating, what change has taken place which renders it constipating, and why?

Dr. C. V. Reynolds.—When you boil the milk you throw down that indigestible product, you give the stomach and digestive juice hard work to do, and constipation in typhoid is not the thing you want. If you have a moderate diarrhœa, as Dr. Starnes says is the thing you want, you let it alone. You should avoid constipation.

Dr. C. P. Ambler.—I mean in regard to the administration of milk particularly.

Dr. C. V. Reynolds.—I shall take issue with Dr. Ambler that it produces a catarrhal condition of the bowels more than it does constipation. I have never noticed that point in the administration of boiled milk, though I see how it could take place, but for that very reason alone I think it is contra-indicated.

Dr. J. A. Watson.—I think that constipation is often an evidence of indigestion, and the doctor's point that the milk was hard to digest, rendered so by boiling, and the constipation following the use of boiled milk would be a proof of its indigestion.

Dr. T. C. Starnes.—I have a case now of typhoid fever. Yesterday I gave raw milk, and was not in a shape where I could peptonize the milk, and today he asked me to give it boiled. Of course I saw no objection and gave it to him, and it was well boiled. I cannot see as clearly as I would like to the point in issue, but we will discuss it more another time.

Biliousness and Its Treatment.

By Robert C. Kenner, A. M., M. D., Louisville, Kentucky.

It is only in comparatively recent times that biliousness has come to be recognized as a distinct disease entity or condition. Of course all the old writers regarded biliousness as a symptom—and the same can be said of constipation or neuralgia and a multiplicity of affections. The fact is many symptoms deserve and demand our very serious attention, and we do our patients a serious injustice when we fail at all times to give these matters attention. Biliousness is not however correctly regarded as a symptom—it is better to state it as a condition resultant upon a sedentary life, or to errors in diet, or as the result of the employment of certain drugs. It is the purpose of the writer to call attention to the most correct method of treatment—or rather to a treatment which has proven to be most successful in my hands. Of course nothing is of greater importance than to have the patient take regular outdoor exercise, and to employ sufficient fruit or vegetable diet. Often a patient will apply for treatment, who, it will be found after questioning him, confines himself almost entirely to a dietary of animal food—and that he rarely if ever eats any fruit or vegetables. It must be the care of the physician to see that these patients employ a varied diet—one that embraces fruit and vegetables. One of the most persistent cases of chronic biliousness which I ever treated was in a man who rarely eat anything beyond ham and biscuit, and drank only milk. It was manifestly impossible for this patient to ever get well, or to be other than a constipated or bilious man as long as he adhered to a diet like this. His diet was changed so that it embodied fruits and vegetables, and such other articles of diet as would leave intestinal debris. The article of food which was particularly valuable was corn bread, hominy and such other food as it is known will leave intestinal debris. But now, let us deal with such drugs as are of value, and the means of employing them. We have all, since our very earliest days in medicine, heard it said that calomel and blue mass act on the liver, and are the drugs which will accomplish the most happy results. I have been engaged in the practice of medicine a long time—nearly twenty years—and I can say with truth that I have never gotten good or satisfactory results from the employment of calomel. In fact I have often been disappointed in the action of calomel, and many times it has produced ptyalism and done my patient the most substantial harm. If all the crimes were brought to light that calomel has inflicted, certainly there would be less of this drug used. Certainly I have given the drug a very fair trial and it has been found wanting. I have found it to cause derangement of the bowels and stomach and to be followed by a degree of weakness that could not be easily explained. For these reasons I never employ calomel in the treatment of biliousness, and I think it the very worst thing we can give our patient. I have often pointed out that patients treated with calomel got along poorly, and when I could bring this fully to light,

by comparison, to other physicians, I rarely failed to convince them of the folly of adhering to that old time mistake—that of depending on calomel to clean the tongue and relieve all of the other symptoms of biliousness. Not only has calomel been depended upon but other drastic purgatives have been greatly relied upon. Even camboge and scammony have been used. One has only to look at the formula of compound cathartic pills and Cook's pills, and agents of that class to be convinced that the old time practice was altogether too drastic, and instead of constantly producing cures laid the foundation of grave intestinal ills. There is in my mind no doubt but that these drugs have done the greatest harm and will do so again. They produce intestinal inflammation and irritation, which must, of necessity be productive of the most injurious results. We therefore desire to urge upon our readers to withhold such remedies as these and place due reliance upon agents which act as a tonic to the intestinal tract and to the liver—in other words producing the result of relieving the biliousness by a tonic and strengthening method rather than by one which is irritating and depressing to the general system.

Now how is this treatment instituted, or rather of what does it consist? In the first place we should give attention to the patient's diet. All will be lost in our efforts to bring about a satisfactory result if we leave this important matter out of the question. Diet upon the very general lines laid down above may be expected to bring good results when conjoined with correct medication. Diet will not, for a considerable period, if unassisted by correct medicine, bring good results. The remedy which acts as a tonic to the liver and intestine, and which acts with greatest satisfaction in this disease is chionia. This remedy should be given in doses of a teaspoonful or a half teaspoonful after each meal. This should be continued for from two weeks to two months. After this time the patient, if he will follow our directions as regards diet and exercise he may confidently expect good results.

"A Plea for the Use of Our Titles."

By Leon L. Solomon, A. B., M. D., Pathologist, Louisville City Hospital; Director of the Chemical Laboratory and First Assistant in the Department of Pediatrics, Kentucky School of Medicine; etc., etc.

That medicine is a noble and dignified profession, no one will gainsay. Nevertheless, it would seem, that the respect, which has heretofore, been accorded the profession as a whole, and its members, individually, is, to-day, not nearly so considerable as it used to be. The fact is, the title, Doctor does not carry with it that far reaching influence and power, which it has been wont to carry. More especially in these broad and free United States of ours, where every man is a sovereign and, at once a yeoman, as well, the exalted position of the physician has come to be a thing of the past. The question seems pertinent why has this state of affairs come about? What has been conducive to its appearance, and is there no way by which it may be overcome? To these questions I make bold reply, and maintain that the fault is chiefly our own. Surely, the physician's greatest obligation is to himself. If this obligation is conscientiously and painstakingly discharged, then it must follow, as a natural sequence, that the obligation towards our fellowman and our God, is likewise discharged. This obligation must mean, that we uphold the dignity of our profession by demanding respect for it. That we demand respect for it, by demanding respect for the title, which signifies all that it is. The title Doctor stands for so little, in this country, because we place so slight a value and estimation upon it. First, and always there must be self respect before the respect of others can be commanded. We abuse our title by applying it often, where it does not belong; we address the student of medicine with the title Doctor, and we fail to attach it to our own names, and to our own signatures. We hesitate to do this, because *we are too modest*. These are gross errors. Tell me where will you find such a state of affairs, save in "free" America?

We hear it said, titles are unnecessary, they are empty, meaningless and cumbersome—they have no worth. So they may be, possibly, but so is your name, your surname and your middlename. These are just as cumbersome, just as unnecessary, except as they stand for you and your worth, except as they serve to identify and differentiate you from your good and bad neigbbors, granting that there are times, when every man desires to be differentiated from these, if possible. The title Doctor is ours and should be used by us. I maintain, at this time, more than at any other time, when the standard in medicine has been raised, and is being raised, yet higher, every physician should attach his title to his signature.

What has already been tbe result of this failure to recognize and appreciate the value of titles? A condition of affairs has

arisen, wherein every peddler of nostrums, and every soap vender is a doctor or a professor, while the professor, in reality, pleads with us, and implores us, that we do him the favor, to drop his title. Is this proper? I think not. It is surely the part of a coward to deny ownership and relinquish possession of that, which properly belongs to him, simply because bold pretenders and charlatans would usurp his rights. Let us establish proprietorship, and be gallant enough, and proud enough, to wage war if needs be, for our just dues. True, *mister*, signifying gentleman, is the highest title with which man can honor man. Recognizing as much, several countries give it prominence, by placing it first, and adding others, seriatim, in the order of their importance and worth: Thus, we have in Germany and Austria, for example, Herr Doctor; Herr Professor, Doctor; Herr Geheimrath, Professor, Doctor; Herr Geiheimrath, Medicinalrath, Professor, Doctor; etc. In these countries, if a title has been bestowed, it means it has been earned, and having been earned, it must be applied. It may be argued, that, *in this country*, titles are often given before they are earned. I trust sucb is not true. If it be true, let ns correct the condition, which makes it possible. Seldom is a thing appreciated, which has not been earned. We must labor and work for a thing, then appreciation comes, and the thing begins to have a value placed upon it. Our title, Doctor, is nowadays certainly earned before we get it. Let us not lose sight of the fact, then, that it possesses value. The public will appreciate us the more, when they come to know and understand what our position is, in this matter. Nowhere is the physician so highly appreciated, nowhere is his rank so high, as in the German Empire, and the profession, there, are solely responsible for this. The German Doctor has maintained the dignity of his calling. He has demanded respect for himself and his colleagues *by respecting himself*. People meet him, they saiute him, they doff their hats to the "Herr Doctor." One instance which especially impressed me, is worthy of rcounting here, because it has some bearing on the subject, at hand: An old gentleman, the grandfather of a sick child, whom I visited, in conjunction with the attending physician, in Berlin, came into the sick room. He was white with age, but as he came into the presence of the "Herr Doctor," etiquette demanded that he make some *honeurs*. He wore a silk skull cap (so frequently worn by the old German gentleman) and feeling the necessity for keeping it on, made apologies for so doing, asking the doctor to pardon his lack of courtesy, as he feared catching cold. This one instance of the respect accorded the medical man, conveys some idea of his dignified and exalted rank. Nor can I see why it should be otherwise, there or here, *except that we have made it otherwise*. It takes men of more than average ability to enter the ranks of a profession; and, to take a creditable place in medicine, means a task, equal to the best efforts of any man and acquired by very few. To be "a professor, then, signifies that one is a 'public teacher' of some science or branch of learning." If this title—if all titles are meaningless—if they are "empty" the fault is our own. We can correct this impression. Let us do it.

No. 323 W. Walnut St.

Contagion of Scarlet Fever.

By Hugh F. Lorimer, M. D., Fair Haven, O.

This feature of scarlet fever was the impressive one to the writer in his first case of the disease. With increased interest succeeding cases were followed out. My first reading on the subject after leaving school is now called to my mind since commencing this article. A small hand book on Practice, by some Englishman, gave the history of a Scotch family who lost one or two children by scarlet fever and were advised to leave their home and after three month's absence a child was taken sick three or four days after their return, with scarlet fever. This child died. Again they left. On their leaving the house each time thorough cleanliness was carried out. After more months of absence their return was accompanied with same speedy results. This time the thatch roof was torn off and burned, replaced by new and no more cases.

It was in my seventh year of practice that I saw the first case of scarlet fever. A girl, B. C., 7 years old, living with her grandparents; had not been off the farm for two months neither had other who had been exposed to scalet fever visited her, had a typical attack of scarlet fever. The father of the child worked in a city twenty miles distant and had written to his daughter four or five days prior to her attack; he was boarding in a family where scarlet fever patients lived.

Another: Z. L., girl 6 years old, was kept at home four weeks. After entire recovery an antiseptic bath was given every day. On a Saturday two other little girls visited Z. L. and played with the same toys in the same place she had during her convalescence. On the following Tuesday

one girl took scarlet fever and the other on Wednesday. Z. L. started to school on Monday and not a case occurred in rhe room and yet several scholars had nevte had Scarlet fever

In another country district W. H.'s children were taken out of school on account of scarlet fever and were not permitted to return that school year. During their convalescence, they studied their books. After the scarlet fever was over, thorough fumigation was carried, yet the books were not destroyed, and on the opening of the school following September several cases were attributed to the contagion found in those books.

Many more just as interesting but space forbids. One of our best authorities states that scarlet fever often arises sporadically. I believe if every case was watched up and a correct history elicited the sporadic would be few. The germ will live years, is insidious and treacherous in its invasion. This feature invites the doctor to become a master in quarantining.

"The Ship's Doctor."

Intense interest to-day centers about our gallant navy; and the recent daring exploits of our sailor heroes add new luster to the brave record of the past. Americans are proud to inscribe new names standing for heroic deeds—the names of Dewey, Hobson, and Powell.

Whatever tells of warships and the gallant deeds of brave sailors is eagerly persued by the American people. Our navy is the popular theme of story and picture. The brave exploits of our sailors are the absorbing topics in newspaper, review and magazine; and everywhere are seen the pictures of great battleships, graceful cruisers, of sea battles and sailor heroes.

But numerous are the current chronicles of sea warfare, vivid as are many of the portraitures of battle, danger and death. there has been one void in the record of heroic deeds. Deep down in the bowels of the ship there is hidden in times of battle a phase of sea life of which the world knows nothing, which has not been written of, and which artists have rarely seen or imagined. Few, indeed, are the phases of human life which have not been dissected by literary anatomist, nor fixed in vivid horror upon the canvas of the artist; and the beautiful brochure, entitled "The Ship's Doctor," which is being issued to physicians by The Arlington Chemical Co., of Yonkers, N. Y., is of unique interest. Nor is this interest due to the novelty of the subject; for, independently of this, the booklet is notable as making the highest point reached in certain features of artistic bookmaking. The deadly battle horrors of the surgeon's merciful vocation are full of dramatic opportunities for the artist; but only an artist of power can make such greusome scenes impressive instead of merely horrible. Mr. W. Granville Smith is such an artist, and he has made for "The Ship's Doctor" a series of battle pictures which touch the highest mark of the illustrator's art. A great naval battle is depicted with thrilling realism, and the grim realities of war are uncovered by portrayals of the cock-pit during an action and of episodes of the surgeon's battle duties. Seldom is realism and local color, the very feeling of a scene, better rendered than in these strong drawings; and the force of the artist's worth is preserved by the remarkable character of the merchanical reproduction. A marvellous advance in illustrative art has followed; and the powerful illustrations of "The Ship's Doctor" are among the most perfect examples of a beautiful new art.

The beauty of this booklet, its professional interest and its timeliness, are certain to make a lively call for it, and physicians who have not received a copy should at once send for it, as the edition is limited and will be issued in the order as requests are received. The more important pictures are admirable subjects for framing, and if there are received a number of requests sufficient to warrant the great expense, a series of plates in large size, with liberal margins suitable for framing, will be made and supplied free to physicians. Physicians who would like to have them for framing should make their request to The Arlington Chemical Co., of Yonkers, N. Y., makers of Liquid Peptonoids, without loss of time.

Anæsthesia and Analgesia.

Dr. H. H. Oldright (Canadian Practitioner) says:

1. Always have your hypodmeric ready beforehand with five minims of Liq. strychnia.

2. Give the anæsthetic to the patient, not the patient to the anæsthetic, *i. e.*, a small amount at longer intervals when breathing is deep or rapid.

3. Watch the effect on the heart at the radial pulse; the regularity and tension tell us more than the rapidity.

4. Choose your cases from either anæsthetic; a weak heart or adynamia indicates either, while pulmonary catarrh or albumenuria contra-indicates it.

5. Whenever possible have the intestinal tract empty and sterile.

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MALARIA . . .

In all forms of malaria, including the pernicious types, the so-called "typho-malaria," and malarial cachexia, which are ordinarily refractive to quinine, Guaiaquin (*Guaiacol bisulphonate of quinine*) has proved of great value. Not only are the plasmodia eliminated more rapidly, but the anaemia or cachexia which usually follows an attack of malarial fever does not develop if the Guaiaquin treatment be continued for a short time after the typical symptoms have subsided.

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NEW YORK SALESROOM, 51 JOHN ST. NORWICH, NEW YORK.

Non-Tubercular Affections of the Spine.

The following are a few comments The Hospital, June 11th, 1898, made upon a discussion that took place recently in the New York Academy of Medicine on a paper by Myers on "Non-Tuberculous Inflammation of the Spine." 1. Syphilitic: These are especially difficult to diagnose. The cervical spine is the most common situation, probably because of the proximity of the throat and pharynx. Townsend believes this condition to be rare, about three or four in a thousand. The co-existence of a dactylitis is not much aid in diagnosis. 2. Rheumatic: Rheumatoid arthritis affects the cervical spine least. It is never accompanied by suppuration. Ransom has very seldom seen rheumatoid arthritis confined to the spine. There is no tenderness on vertical pressure or on walking. Townsend thinks that in rheumatic disease the kyphosis is more rounded and less distinct than in tubercle. 3. Malignant: Myers considers this a rare condition. It is usually secondary and may be carcinomatous or sarcomatous. Kyphosis is exceptional, but the spinal nerves are frequently involved in the new growths. Gibney considers the intensity of the pain and its localization in certain regions an important aid in diagnosis. It often follows cancer of the breast in women. An example of this was quoted by Curtis in a woman 35 years of age, whose breast was removed a year before the disease appeared in the mid-dorsal region. Very marked signs of pressure on the cord and intense pain served to localize the growth, and laminectomy confirmed the diagnosis, but failed to give relief. Dowd emphasized the frequency with which malignant disease of the spine follows breast cancer. In five out of twenty-nine of his own cases it occurred. 4. Gonorrhœal disease of the spine is exceedingly rare. 5. Typhoid: An inflammatory condition of the fibrous structures of the spine has been observed to follow on typhoid fever. 6. Infectious inflammations of the spine following exanthematous diseases usually attack the cervical vertebræ, possibly due to direct spread from the throat. 7. Traumatism frequently induces inflammation of the spine. Lloyd thinks that tearing of the ligamentum subflavum, with hæmorrhage and subsequent inflammation, often simulates Potts' disease. More severe lesions can usually be correctly diagnosed. Williams reports an interesting case of traumatic hæmato myelia with necropsy. 8. Hydatids: Lloyd refers to a case which began with kyphosis, followed by the development of a distinct tumour, which on removal proved to be a hydatid tumour. Wood operated with success for a similar condition in the lower cervical region in a boy aged 10. The mother cyst and 16 daughter cysts were removed. Cerebral meningitis carried off the patient 18 days after the operation. 9. The possibility of scurvy, rickets, or aneurism, giving rise to symptoms very like those of Potts' disease, must always be kept in mind.

The Diagnostic Value of Tuberculin.

Dillon Brown, (Pediatrics March 1, 1898,) says on account of the difficulty in making early diagnosis in tuberculosis, every means at our command should be used, and whatever may be the ultimate decision as to the therapeutic value of tuberculin, there can be no doubt of its great diagnostic value. Young children should be given one milligramme and adults from five to ten milligrammes, the tuberculin to be diluted with salt water.

The characteristic reaction is a rise of temperature and of a pulse-rate. The local reaction is not of so much diagnostic importance. The absence of reaction is almost positive proof of the absence of tuberculosis. The presence of the reaction in four cases out of five shows the presence of tuberculosis. The tuberculin method is so simply and easily applied, it is so free from danger, and gives such valuable information in a class of cases in which knowledge is so valuable and of much practical importance, that it is surprising that its use has not become more general.

The Climatic Treatment of Tuberculosis.

Dr. S. Edwin Solly of Colorado Springs, read a paper on this subject at a recent meeting of the New York Academy of Medicine. He said that the climatic treatment of tuberculosis seemed to him not to have been rooted in science and fact in the past, but had hung in mid-air. The basis of all climatic therapeutics was hygiene, and the only way one could judge of any particular climatic was by the meteorological data—a point frequently overlooked entirely by the physician. A large amount of the desired data had been accumulated, and if properly digested would be found in condition for assimilation. It was possible now to estimate the value of a particular climatic without relying upon personal statement. Much valuable imformation had been secured by the United States Signal Service. In the choice of a climate the disease was only one part of the problem, the individual being an exceedingly important factor.

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APPENDICITIS.

In the New York Medical Record of May 21st appears an article, "Correspondence between a Layman and a Surgeon on the subject of Appendicitis," by Dr. Robert T. Morris, of New York, which will well repay careful perusal by all of us, whether medical men, strictly speaking, or surgeons, or practicing both medicine and surgery.

There is no question but that some cases from the nature of the circumstances surrounding them, cannot receive the benefit of the best medical or surgical care, but is there, concerning any medical subject, such a diversity of opinion as exists to-day in regard to appendicitis? Some believe that there is one class of cases which requires medical treatment alone, and another class which needs surgical care. Others seem to think that all cases can be treated medically, but operation undertaken too many times when all hope is gone, reveals conditions which could never exist compatible with life for more than a few hours, or days at the furthest. It is not to be marveled at that under such circumstances the layman should be far from clear as to what course he (or his friends for him) should pursue in the event of an attack of appendicitis. Dr. Morris in his article takes up the subject at considerable length, carrying on a correspondence with a layman who is supposed to be greatly troubled over the subject, but one who resolves to submit his doubts and fears to a surgeon of recognized ability, in the form of a series of questions, each of which Dr. Morris answers in detail. A synopsis of these questions and answers will be helpful, I am sure, to many of us, and are herewith given:

1. Is not the public needlessly suffering not only painful operations, but also death, because of the general belief that the only genuine cure for appendicitis is the removal of the offending member?

Answer. "From statistics of many hundreds of operations, the death rate by surgical treatment is less than one per cent. in the class of cases in which infection is limited to the confines of the appendix proper." This includes both "primary" and "interval" cases. In wide spread infection, outside of the confines of the appendix, the death rate is five per cent. It has been determined that the death rate in appendicitis treated by any sort of medical treatment is not likely to be less than 25 per cent. eventually although it is believed that in first attacks is not much above 10 per cent. He then addresses letters to ten patients last operated upon, asking them in regard to relative amount of pain with surgical and medical treatment.

To all of these letters the answer was, invariably, "less pain under surgical, than under medical treatment."

2. Does not the very fact that successful operations require more than ordinary skill lead the family physician to call in the help of a specialist in cases of simple doubt and fear, on his part, rather than certain diagnosis that his patient has an acute case of inflammation which will yield only to surgical means?

Answer. The typical family physician cares, first of all, for the best interests of his patient, and he cares very little for the opinion of the surgeon or of any one else, unless in his opinion the patient is likely to profit by the consultation. In cases of "simple doubt and fear on the part of the family physician," a good consultant often sets matter right, and the physician has the comfort and peace of mind that goes with actual knowledge about his case.

3. Are not the patients, thus given over to the specialists, operated upon out of professional courtesy, even when the specialist may know that the case does not require the operation for the immediate safety of the patient?

Answer. I do not know of any responsible surgeon who would operate until he felt sure of his diagnosis of appendicitis, unless he found some other condition sufficiently serious to warrant operation. It is usually an easy matter for one who is at all expert to make an accurate diagnosis of appendicitis, but sometimes a pelvic abscess or tuberculosis of the peritoneum, for instance, may make diagnosis difficult. Both of these conditions, however, require operation.

I do not know of any surgeon who would operate out of courtesy for the opinion of the family physician, and I do not know of any physician who would allow a surgeon to operate unless the surgeon had presented sufficient evidence to convince the physician that operation was advisable.

4. Is not the expert operator tempted to take advantage of so-called "safe" cases, *i. e.*, where infection is limited to the confines of appendix proper, both for his own reputation, and practice?

Answer. Some men are tempted to consider their reputations above the interest of their patients, but the really expert operator undertakes the most difficult cases, because such cases offer limitless opportunities for application of knowledge and skill.

6. Is it possible for the ordinary inflammation of this part of the intestinal canal to be distinguished from inflammation of the appendix proper, except by expert physicians?

Answer. The diagnosis is usually easily made by any physician in average general practice.

7. Is it not entirely possible, by other than surgical means, to relieve inflammation of this part of the intestine?

Answer: Many cases can be relieved by medical treatment, but it is impossible to tell in advance which cases can be so cured. By waiting, cases may pass into a complicated stage and thus operation be more difficult. Inasmuch as surgical treatment causes less suffering, less loss of time, and fewer deaths, it seems wise to resort to it.

8. Are cases of appendicitis proper, when cured by other means than the removal of the appendix, any more likely to recur than inflammation (severe) of other parts of the intestines?

Answer: Cases of appendicitis "cured" by medical means are almost certain to recur, for various reasons, unnecessary to mention.

9. Is it a fact that an expert surgeon can or cannot discriminate the appendicitis symptoms better than the ordinary family physician?

Answer: The careful observer who has improved his opportunity for observation seldom makes a mistake, and when he does, it is commonly for some condition which needs operation just as much as if the case were one of appendicitis.

11. Is it possible by simple statistics, such as can be obtained, to ascertain after the operation has been performed whether it was needless or not?

Answer: It would be a simple matter to determine upon examination of the specimen whether the operation were needless or not.

12. Why is it necessary that there be controversy regarding these questions?

Answer: There is necessity for very little controversy on appendicitis questions. Few diseases are so well understood. The statistics prove the advantages of surgical treatment beyond a doubt. From Dr. Morris' experience the patient himself usually desires it.

THE NEURASTHENIC UNIT.

Things which are "made of stuff, such as dreams are," must be discussed from the basis of something with which one or more of the senses have come into contact.

For instance, courage and heroism are very real things these days, things for the proven possession of which Congress very righteously votes men medals and praise; and still, courage and heroism unassociated with some person, are almost inconceivable things.

The unseen forces are, of course, the only forces, but the manifestations of force, in some, functional processes, such as digestion, by that commonness which grows out of the every day allusion to them, have taken on a meaning which is so vivid that manifestations of force are taken for the force itself, and a suggestion of mystery regarding the function seldom comes to the mind.

When the process of digestion is interferred with by that which is called nervousness, the abnormal action of the nervous system seems a little more strange than does the fact that nerve force is able, usually, to maintain normal digestion.

A common illustration of how a nerve center is formed, is to compare it to the structure of a galvanic cell, and then from that illustration the step is easy, to say that nerve force resembles electricity.

The similarity between the two seems the clearer probably because so little is really known as to what either is; but familiarity with electric phenomena passes for knowledge upon the subject of electricity, and so a formula is worked out that explains nerve force and its actions.

Electricity is a thing which is distinct from the cell which generated it. Nerve force is a thing distinct from the nerve center which generated it.

The neurasthenic unit is a nerve force quantity. It may be a quantity in excess of the normal, or a quantity less than the normal. It may be nerve force out of balance, or nerve force delicately poised. It may be perverted nerve force. It may be nerve force overpowered by inhibition, or it may be controlled by a condition corresponding to a short circuited electric cell, in which all inhibitory power is lost. The protean manifestations of the neurasthenic unit are accounted for, and only accounted for by a unit of varying values. The conductor's molecular relation to the electric

current has not been determined, neither has the nerve's protoplasmic relation to the nerve force current, been made out; but the neurasthenic unit doubtless travels in the direction of least resistance. Nervous demand has the power of attracting, in some way, nervous supply, but instead of the nerve centers supplying the demand with normal nerve force in a regular way, the centers supply a pathologic nerve unit, or what amounts to the same thing, nerve force at irregular intervals. The neurasthenic unit is very largely self-propagated; that is to say, when the neurasthenic unit causes a yawn or a crying spell, the way is paved for the second yawn or cry to take place much easier than did the first.

When the neurasthenic unit travels in the direction of the involuntary functions, its production is more frequent, hence more damaging. Primarily this unit is always the product of a weakened or non-resisting will.

SERUM THERAPY IN DIPHTHERIA.

The status of serum therapy in diphtheria is now such that it seems incredible that there can be found physicians (and there are many) who have never used it and have no desire to. This is largely due to the fact that in many cases it has been used by those entirely unfamiliar with the position occupied by antitoxine in medicine only to be met with failure. These failures have been brought to the notice of others equally unfamiliar with the product or the circumstances attending its use other than that it *was* used and failed, and the result has been to create distrust and unbelief.

As a matter of fact we have only to look at the mass of evidence piled up by competent observers to realize that in antitoxine we have *the* remedy and the only remedy for diphtheria, and having given it have done all that can be done in the way of treatment for the disease itself. The collective investigation of the American Pædiatric Association is proof positive of this, giving, as it does, a mortality of 12.3 per cent. in a total of 5794 cases, and of 8.8 per cent. after excluding cases moribund at the time of injection, or dying in twenty-four hours; while in 1256 laryngeal cases recovery took place in one-half without operation, and in the remaining 533 in which intubation was done the rate was 25.9 per cent.—"less than half as great as has ever been reported by any other method of treatment." Further, for the sake of contrasting figures, the Detroit Board of Health has recently published a list of 1778 cases occurring from May, 1896, to March, 1897. Of these 1090 were treated without antitoxine, with a mortality of 32.64 per cent.: 679 were treated with antitoxine, with a mortality of 11.52 per cent.—a reduction of two-thirds! and these facts and figures could be duplicated without end. In the face of such evidence how can any one longer refuse to use it?

Antitoxine is not a tissue repairer, and after the disease has progressed for several days, and tissue destruction has taken place—while it may be well to give the serum as a dernier ressort, failure to cure need not cause disappointment in the remedy. Right here seems to be the main cause for fault-finding with antitoxin, it is given *any time* with the full expectation of curing the patient, regardless of the fact that to be effective *it must be given early in the disease.* The figures show in general that when administered on the first day the mortality is 5 per cent.; the second day 8 per cent.; the third day 8 to 10 per cent.; the fourth day 20 per cent., and on the fifth day 35 per cent.; after which its action is extremely uncertain. The same may be said of any treatment of a grave disease when it is begun too late.

If those who have never used the serum treatment, or having used it have failed in results, will administer it with the foregoing facts in mind, it will take but a short time to bring the death rate in diphtheria for the United States down to that of the Harper Hospital—6.7 per cent.—and as Dr. Suttie remarks, "remove it from the bad repute it has hitherto held of being one of our most fatal diseases."

THE SURGERY OF THE HEART.

A surgical operation on the heart ten years ago was a thing unheard and undreamed of, and is an innovation of our modern progressive science made possible only by our advanced methods in surgical technique. True, aspiration has been repeatedly done for pericardial effusion, and of late years the pericardial sac has been opened, thoroughly cleaned and drained—some of the bolder surgeons even going so far as to aspirate the heart, but as for actual operative procedures on the organ itself it has been only within the last three years, prompted by success in dealing with other structures that anything in this line has been attempted.

It may be readily seen that any operation on the heart must be for some injury that has been inflicted, for while to the laity, any injury to the heart, however slight, must be immediately fatal, we who have as it were the keeping of the lives of our fel-

lows know differently, and that this organ may receive a very grave injury, and the patient live a number of hours or even recover. The chances for spontaneous recovery, however, are so slight that they should no more be trusted than should the chances for spontaneous reduction of a depressed fracture of the vault.

Given then a case of gun-shot or stab-wound of the heart, where the patient is alive, what is the duty of the attending surgeon? In the majority of cases all that is done is to pack the wound, administer stimulants and —— watch the patient until he dies. "While there is life there is hope," runs an old saying, but hope never yet cured a case demanding surgical interference and never will, and that is about all the treatment the patient receives—the so-called expectant (do-nothing) treatment. What can and should be done? Let us see.

The patient is alive, but we know that he has but one chance in a thousand to live —yet he may, and if in fairly good condition, were the cardiac wound closed, his chances for recovery would be increased ten-fold.

A recent compilation shows nearly two hundred cases of stab and gun-shot wounds of the heart in which the patients lived an hour to several weeks. Obviously, then, if the heart may be punctured with impunity, and will withstand for a time severe traumatism; so simple a procedure as cutting down upon it by a modified Estlander, finding and closing the rent by suture, will certainly not decrease the chances for recovery. That this is true is evinced by the reports of a few recent successful attempts both at home and abroad. With such facts confronting us it is surprising that the procedure has not become more general—that it has not is evident from the knowledge of two recent cases of stab-wound occurring in the hospitals of one of our leading cities. In both instances the patient was received in good condition, one living for several hours, the other for three days, and the expectant or do-nothing method employed.

Any operation done with the chance of saving a life is good surgery, and if an operation has saved but a single life out of thousands of attempts, where to do nothing meant certain death, such an operation is justifiable.

In the name of the profession you represent, gentlemen, when confronted by such a case, *do something*.

NEW YORK MEDICAL COLLEGES.

Up to the present year there have been three medical colleges, each of which has attained reputation throughout the country as a teaching centre for the metropolis. Especially has the name Bellevue been sounded South and West, for the reason that so many of its alumni hail from those sections. Then, again, the fact that Bellevue Hospital is more widely known, and has been for years, than any other New York Hospital, has added to the name and fame of the college. It is not generally understood, however, that all three colleges are represented in the Bellevue Hospital staff, each college having a separate division, and a fourth being a non-collegiate department.

Until quite recently the various colleges, two of which have been nominally integral parts of University systems, have been governed almost entirely by the faculty, the University to which the college belonged having but slight voice in its control. Several years ago, however, the College of Physicians and Surgeons, which had been nominally the Medical Department of Columbia University, was firmly incorporated with the University, and is now governed to a great extent by it, at least as far as the finances of the institution are concerned. Within a year the medical college of the New York University has been more closely incorporated with the University, its property being deeded over to the institution, the University in turn assuming control of the salaries, etc,, of the medical faculty.

For some time there has been a desire on the part of the University to unite the medical departments of Bellevue and the University, which union, if it could have been brought about, would have resulted in a powerful combination. But dissension arose in regard to the apportionment of professorships, etc., and the scheme fell through. Within the year, however, so much trouble has arisen between the medical faculty and the University council, that at last, the greater number of the medical faculty have left the college and have formed a strong nucleus for a new school. The Cornell University has for some time been anxious to start a medical department in New York, and the opportunity seemed ripe when so large a portion of the University faculty were dissatisfied and willing to go elsewhere. As a result the Cornell University Medical College has been organized, to commence operations next fall, with such men from the University faculty as Lewis A. Strimson, J. Clifton Edgar, Henry P. Loomis, W. Gilman Thompson and W. M. Polk, the latter being the Dean of the Cornell School.

The union of the Bellevue College and the men remaining loyal to the University

has now been completed, the name of the new school being the University and Bellevue Hospital Medical College, and the Dean, Dr. E. G. Janeway. The alumni of both institutions will now be enrolled on the books of the University of the City of New York. There are now three great schools, the Columbia, the Cornell, and the University of New York, all of which offer superior advantages, and in all of which medical education will be ably conducted. The changes have resulted in the formation of more powerful schools, and the ultimate benefit to be derived will be certainly a most excellent one.

BUSINESS METHODS IN THE PRACTICE OF MEDICINE.

For many years medical men have laid themselves open to just and merited criticism because of "slipshod" careless methods, which from the standpoint of a business man are as radically wrong as would be the most glaring faults in surgical or medical technique. How often do we hear that "Doctors are not business men" or that "Doctors are such poor business men," or expressions to the same effect! Such remarks as these are based too on actual facts, and the truth in many cases cannot be gainsaid. To be sure our first object in the practice of medicine should be, not the "storing up of riches," but honest, faithful endeavor to be of service to suffering humanity; to prevent the ills of the body as well as to cure; but in so doing, we must not forget that in mere justice to ourselves a certain reward or recompense is due, in return for "services rendered." I think we have ourselves largely to blame for the unfortunate condition of affairs in which, medical fees are paid after all others, if indeed at all. Each of us in this world should do his share of charity, and time spent in doing charitable work is repaid oftentimes by the gratitude of the recipients, oftentimes by an entire lack of appreciation of the kindness, but in such cases it should be thoroughly understood that services are gratuitous at any rate, whether the patient thanks us or not. But with people who can afford to pay, whether small fees or large, why not use methods such as are in vogue in commercial circles? Why should doctors trust every one any more than business men? Why should it be the custom (so prevalent) to pay for medical services when one can well afford to spare the money, rather than at the time when such bills are due? While it is true that "medicine is the noblest of professions" why should it be necessarily "the poorest of trades"? This question can be best answered by the fact that we are, as a rule, not careful enough in our business relations with patients. If it were the custom to send out our bills at frequent and regular intervals with the implied expectation that prompt payments were to be made, we should certainly collect more accounts than we possibly could by delaying for six months or a year after the completion of services. "Strike while the iron is hot" is an old adage which in medicine can prove of the greatest advantage to the practitioner. People as a rule have little interest in bills for services rendered many months before. If no response is made after one or two months have elapsed let a statement be sent out to remind the patient of his indebtedness. Surely any man who intends paying his bill, will either respond in a short time, or make known his reasons for failure to do so. If no response in any way is made to the statement or letter, a personal "talk" may be successful in obtaining promise of small installments at least at intervals. But as a rule we can consider the bill as lost, unless legal steps can be successfully taken. Some may think these suggestions as being of too "mercenary" a character, but the sooner the medical profession takes the stand that while medical services are rendered promptly and gladly, they should be paid for with equal promptness, the better it will be for us, for we also must live, and that too not "on bread alone."

SURGERY.

Probably fewer than ten in a hundred surgical operations are for the repair of accidental wounds.

Generally speaking then it follows that surgery is a science, the foundation of which is in the failures of hoped for remedial measures. A lance in a phlegmon is an ugly apology to the suffering man for therapeutic unskilfulness.

When surgery is looked at from this point of view it seems passing strange that such an advertisement of the miscarriages of efforts directed towards health restoration, as surgery is, should be a thing of grateful wonder to the laity, and an object of pride to the medical profession. The laity goes still further, and notwithstanding surgery is at best only the route over which the physician marches from the field of his defeat, the laity commends and even recommends the knife more freely than they do the distinctively therapeutic measures.

There is to the lay mind a glamour about surgery which is never inspired by anything medical, and it is not altogether a figure of

speech to say that there is a sort of awe inspired holding of the breath, and an undertone of voice which comes over a crowd of people when a surgeon is announced as being present.

Every patient, and possibly every body else, has within himself a lesser or greater spark of desire to be thought of as heroic, and surgery gratifies that desire in the patient by kindling in the minds of his friends an ardent respect for his fortitude, which constitutes objective heroism.

Surgery begins where medicine fails. So surgery is something easier than medicine. Because surgery is easier than medicine it cripples therapeutics.

It does so by promising to the patient an easy, speedy, and painless removal of diseased structure, while the restoration to healthy function of the same diseased structure by medicinal means, the patient knows would require possibly a long time.

Surgery cripples therapeutics by promising to the physician the applause which the title of surgeon carries with it, the making in an hour of a larger fee than he could hope without the knife to make in a month, and the avoidance of the study which the difficulty of the case is forcing upon him.

Provided that restoration of healthy function could have after a time been brought about, then the temporary gain to the patient by the operation would ultimately make to him a loss, while as has been said the abandonment of the case by the physician to surgical operation, is a loss to medicine and so to mankind.

A surgically cured man is never in a state of physiologic health. Surgery, therefore, leads farther and farther away from the goal of medicine, the restoration of healthy function.

Surgery should not be any less skilfully done, but much more skill in placing in the way of disease the physiologic actions of medicine, should be sought for.

TRANSFUSE.

Why is it that so valuable a measure as transfusion is so seldom used? Save in the practice of the more advanced city physician, and in hospital routine, it is a rare thing to find any one who employs it, yet it is doubtful if there is a single physician of fair patronage to whom cases are not constantly presenting in which this most valuable therapeutic measure is not applicable.

Transfusion no longer means the transmitting of blood from a generous bystander, with its consequent risks to both parties concerned, yet this is just what is understood by a vast army of medical men today, despite the countless medical journals scattering knowledge broadcast. Plain every day salt and water—the normal salt solution, i. e., water containing the same proportion of salt as does the blood—six-tenths of one per cent.—roughly a drachm to the pint, is the fluid now used in cases where transfusion is indicated. Nor is it necessary in using it to risk the opening of a vessel for its transmission, for we know that with the canula plunged into the tissues, absorption will take place sufficiently rapid for all ordinary purposes.

Transfusion is of service in so many conditions that it is difficult to enumerate them all, but those most frequently occurring to the general practitioner are: shock, collapse, rapidly wasting diseases, exsanguination from any cause whatever, impoverished blood supply in acute disease, and eclampsia. The comparatively recent discovery that transfusion in this last, lessens the mortality nearly fifty per cent., makes the neglect of its use in this affection little short of criminal.

An emergency outfit is simple and quickly equipped. A douche bag, an aspirating needle (carried in the pocket case for just such an occasion), a quart of water that has been boiled and cooled to about 98 deg. with two teaspoonsful of common table salt, complete it. Fill the bag and hang it on a nail about five feet above the patient, attach the needle to the tube, and while the water is spouting, plunge it into the mammæ, and your apparatus is at work. Should you ever get caught without the needle, insert the tube high in the bowel and inject two or three pints, leaving it there for absorption.

It is astonishing how quick the reaction will be in most cases, while the amount to be transfused can be determined by the conditions.

"THE PASSING OF HYPNOTISM."

Under this heading some of the medical journals have recently indulged in editorial comments upon hypnotism, indicating the disfavor with which it has generally been looked upon, and expressing the opinion that even the small degree of favor which it had met in some quarters was diminishing, and that it would soon be relegated to the limbo reserved for unsound medical fads and fancies. Is this view altogether just or warranted by the facts?

The Paris school, with its peculiar and narrow range of experiments is still active; Bernheim, with his much broader and more sensible teaching, is still exerting a wide influence in its favor at Nancy; good men

are making use of it and reporting favorably, in England, Germany, Russia, and in almost every important town in America. On the whole, it is safe to say that never have so many physicians been making use of it, and never has its use been extended to so many different classes of ailments as at present.

Another important point to be noticed is this: hypnotism is now acknowledged as a *fact* by the medical profession generally, whatever its significance and value may be; and standing approved, as it does, by such men as the late Professor Charcot, Bernheim, Forel, Fréré,, Kraft-Ebing, Bramwell, and many more who could be mentioned, both in Europe and America, it is an accredited means of cure, and any physician who knows its use and honestly desires to make trial of its virtues in properly selected cases, for the best good of his patients, has abundant authority for doing so, and neither charlatanry nor any undue desire for notoriety can be charged against him. For the past three years at least papers advocating the use of hypnotism have been read and discussed before the American Medical Association at its annual meetings, and books and reprints are constantly appearing. So whatever may be the value of hypnotic suggestion in medicine—whether eventually it may prove a good or an evil thing—the facts hardly indicate a decline in the interest which has undoubtedly been shown regarding it, nor in the use that is being made of it by physicians.

SPINAL PUNCTURE.

Any new measure which assists to an accurate diagnosis is naturally hailed with delight by all conscientious phsicians. Several years ago Quinke of Kiel, suggested that it might be possible to withdraw fluid from the spinal canal in certain cases of cerebro-spinal disease and from its physical, chemical or bacteriological condition determine positively as to the nature of the case. That his suggestion was a valuable one the results of many clinical investigations have fully proven, but no where more conclusively than in the recent epidemic of cerebro-spinal meningitis in Boston, Massachusetts, where of 55 cases in which spinal puncture was performed at some time in the course of the disease, in 38 cases fluid was withdrawn, which when submitted to bacteriological tests, showed conclusively the presence of the Weichselbaum micrococcus, the so-called diplococcus intracellularis, now generally considered the specific agent of the disease. The demonstration of this germ then was proof positive of the nature of the case, and the performance of the lumbar puncture is a procedure that should be resorted to in every doubtful case where the symptoms of acute cerebro-spinal trouble with fever suggests the possibility that a careful bacteriological examination of the fluid obtained may clear the diagnosis.

Not only has the micrococcus of epidemic cerebro-spinal meningitis been thus obtained, but also the bacillus of tubercular meningitis, and the ability of the physician to decide definitely upon one of these two conditions may be of great value to him from the point of prognosis.

The method of performing spinal puncture is very simple. Under strictly aseptic conditions a rather large hypodermic needle is inserted between the third and fourth lumbar vertebræ, a little outside the median line and pointing slightly upward and inward, the patient lying on right side with knees drawn up. The tip of the index finger or thumb of the left hand can be held in the middle line between the spines of these two vertebræ, and with that as the guide the needle is pushed in with the other hand as suggested above. If the tension of fluid within the canal is raised it may drain from the needle without aspiration, and can be caught in a small sterile test-tube, if no fluid comes, gentle aspiration after screwing the needle in situ to the barrel of the syringe may withdraw a small amount of fluid.

At the point suggested there is no danger of injury to the cord because it is well below its end and yet is at a point where the subdural space exists and is likely to contain cerebro-spinal fluid.

FEMALE NURSES IN MILITARY HOSPITALS

A recent newspaper paragraph announces that the Secretary of War and the Surgeon General of the Army have decided to entertain no propositions from female nurses for service in the present war with Spain. No reasons were stated.

It will be remembered by our older readers that Florence Nightingale, in 1854, took a corps of female nurses to the Crimea for service in the English military hospitals. It was an innovation, but the experiment was highly approved. Again, during the American Civil War, female volunteer nurses were employed to a considerable extent in Confederate hospitals. Although there was some opposition on the part of medical officers, those who gave them a trial were well enough satisfied to retain them until the close of the war.

It is to be noted that, at those dates, training schools for nurses were unknown. Most of the women who volunteered were totally unpracticed, and probably no one had had any experience in hospitals. At this day, in all the large cities of the country, there are training schools for nurses attached to civil hospitals; and not only these institutions, but private practitioners make use of female nurses almost exclusively. It has been found that women have superior aptitude for nursing, as well as teaching, and they have largely displaced men in both these skilled occupations.

In view of the success and satisfaction experienced from the employment of female nurses in civil life, and their constantly increasing numbers, and with the recollection of their service in previous wars as hospital attendants, we are inclined to the supposition that this decision (if true) grows out of the personal predilections of Surgeon-General Sternberg. It reminds the writer of the invincible opposition of an old naval surgeon, during the civil war, to female hospital employees, and his appeal to the chief of his department for authority to appoint a man as matron of the hospital under his charge. It seems rather improbable, so near the dawn of a new century, that there will be general approval of the exclusion of women from positions of usefulness which will afford them opportunity for patriotic service and release an equal number of men to act as combatants.

VERACITY IN MEDICAL PRACTICE.

The remarks made on the subject of Heart Failure suggest brief consideration of truth-telling in medicine. It is indeed worthy of extended treatment, but time and space at present forbid.

The simple fact is, most people are not satisfied with unadulterated truth, when it affects their own reputation or pecuniary interest. Truth is good enough for the other fellow, and people want all of it which concerns him, and as little as possible for themselves, provided it be of a damaging sort. For example, in reference to diagnosis, it is often seriously impolitic for a physician to "call a spade a spade," when questioned by anxious friends. If cornered, he must say something, and it is more than he dares, to name syphilis or delirium tremens. A learned Latin term will not serve in most cases, and a bold, unblushing falsehood is the easiest path out of the difficulty. To say that a patient is only drunk, when found insensible, gives mortal offence to relatives, while they are rather gratified with a diagnosis of poisoning by opium, if vigorous measures of treatment be resorted to. A doctor must beware of hinting hysteria to a large fraction of humanity as a probable condition of wife or sister; but congestion of the brain, or even apoplexy, is received with profound satisfaction, and the reputation of the doctor is magnified by the recovery of the patient. The doctor who tells the truth in these instances is sure to come off with damaged reputation, and probably loses his fee besides, while the pliant liar is the gainer in both respects. This is uttered from actual experience, in cases where the writer was supplanted by practitioners of more worldly wisdom.

Some observation has also convinced him of a common habit among certain practitioners of magnifying the complaints of their patients—even of misnaming them—in order to heighten the value of their services. There are many persons who feel proud of recovery from serious ailments and are correspondingly liberal to the doctor who has cured them. This little trick, therefore, works happily for both parties.

In choice of conduct between truthful and untruthful dealing with people, it is mainly a question of self-respect or cupidity on the part of the practitioner, and every one must judge for himself.

THE SECOND ELECTRICAL EXHIBITION

The second electrical exhibition was opened in the Madison Square Garden, New York, Monday evening, May 2d. It has been prepared and arranged with great skill, but it scarcely has come up to the promise that it would be superior to the electric building of the Chicago Columbia Exhibition in 1893. The official catalogue comprises 88 pages, of which nearly one-half is filled with advertisements. The medical profession ought to be particularly disappointed that the Exhibition of Electro-Therapeutical Instruments is much neglected, and it seems that the manufacturers made a grave mistake by their absence. The Edison Manufacturing Company appears to be the only representative of electro-medical apparatus in Section P. The catalogue has only two more firms exhibiting instruments in this line, who are J. Jones & Co., medical batteries, in Section O, and the United States Electrical Supply Company, who show a complete X Ray outfit for the use of physicians and surgeons. It is a disappointment to notice the absence of manufacturers of X Ray apparatus from Boston and Philadelphia, who otherwise advertise their goods largely, print regular bulletins, refer to their catalogues Nos. 240, 260, etc., but systematically refuse to be present at

any exhibition to demonstrate their outfits. It seems there is good prospect for a new concern in electro-therapeutic instruments, in fact a want, as we need improvements, new and reliable instruments.

REPORT OF THE MASSACHUSETTS STATE BOARD OF HEALTH.

The Massachusetts State Board of Health is certainly to be congratulated upon the report it has just issued upon the subject of epidemic cerebro-spinal meningitis. One can scarcely imagine a more useful State publication or a fuller contribution to knowledge of epidemic diseases than is this work of Drs. Councilman, Mallory and Wright. It was a happy thought which determined the State Board to undertake its dissemination and the effort may well stimulate other State Boards to a similar action, not only to the advantage of its own citizens and the State's profession, but to the advantage of the world at large.

Massachusetts is to be congratulated in having at hand, in the hospitals of Boston, three men so competent and so ready to undertake the work of studying and reporting upon this epidemic. Dr. Councilman holds the chair of Pathology in the Harvard school and to him, doubtless, is due the main credit of the success of the task.

The opportunities offered were very great, inasmuch as no less than 111 (one hundred and eleven) cases were treated in the large hospitals of the city, and of these 35 (thirty-five) cases came to autopsy.

In the early pages of the report a history of the various outbreaks of the disease is given, and one can but be struck by the fickleness it shows in its selection of localities, in one year here, in another hundreds of miles away, so that it becomes the duty of every medical man to make himself as familiar as possible with this latest investigation of a disease so little understood, and one which he may be called upon to treat at any time. An interesting point which this study brings to light is the extreme rarity of the disease in infants under one year of age, so that it may almost be taken for granted that the cases diagnosticated as epidemic cerebro-spinal meningitis in children under one year are wrongly considered. A general recognition of this fact will greatly assist future observers in reference to a comparison of statistics.

Another valuable point which seems to be well established is the probable non-contagiousness of the disease. This really seems to be practically settled; its epidemic appearance depending rather upon its infectious nature than upon its contagiousness. This infectious agent is probably a specific micro-organism, first described in 1887 by Weichselbaum. In the 35 cases examined after death by Councilman, Mallory and Wright, this organism was found in all except four.

To the many people to whom the mere name of cerebro-spinal meningitis has been a terror it will be a great relief at last to know that there is actually no danger from contagion.

IMPROVEMENT IN MEDICAL INSTRUCTION.

A most interesting and timely discussion was that at the recent Congress of German Physicians at Wiesbaden upon the subject of medical instruction. Von Ziemssen and Von Jaksch took the most active part, and it appears from the meagre reports which have reached us that these two leaders of scientific medical education were in accord in the belief that not only should more time be spent in the medical course than at present, but that more time should be given to practical instruction, especially in the line of therapeutic measures. The point was clearly brought out that there is a great deal of material which serves admirably for teaching purposes that is very generally allowed to go to waste, and that it is by a fuller utilization of this material in a practical way that great benefit is to be done to the future student.

In America we all know that many young men are yearly turned out of medical colleges who have had little or no real experience in the treatment of disease as they must meet it in their early years of practice, and yet in the very city or town where they may have studied, perhaps there may have been a half dozen dispensaries treating any where from ten to a hundred free patients a day. The value of co-operation on the part of the management of such dispensaries with that of the various medical colleges cannot be too strongly urged. The benefit redounds equally to both. The one supplies material for instruction, the other brings enthusiasm, new methods, and an eagerness to study and to work which cannot help but throw light upon many conditions which will pass uninvestigated by the busy practitioner in charge.

To our credit be it said, however, these methods so warmly recommended by the Germans have already been adopted by a number of the American schools. In them the days for mere didactic teaching seems to have altogether passed, and the more rational method of studying cases as they are found is adopted, cases too, whether surgical or medical, not for the most part selected to illustrate a more or less formal

lecture, but cases taken at random from the dispensary and hospital wards, the clinical and pathological laboratories with their chemical, microscopical and bacteriological outfits supplementing in each case the clinical or operative findings.

In this way, in the later years of the medical course, the same rational methods are practiced as in the earlier years in the subjects of anatomy, physiology and pathology which now are taught, not so much by lectures as by practical class-room and laboratory demonstrations.

THE MEMPHIS LANCET.

The first edition of this valuable Journal has just been received. It will be issued monthly, and edited by the following well-known physicians of Memphis:

R. B. Maury, M.D.	M. Goltman, M.D.
M. B. Herman, M.D.	E. E. Haynes, M.D.
W. W. Taylor, M.D.	J. H. Venn, M.D.
Wm. Krauss, M.D.	E. C. Ellett, M.D.
J. M. Maury, M.D.	S. E. Rice, M.D.

We congratulate the promoters of this new Journal upon the nice appearance of the first issue. Judging from this initial number, we predict for it a useful and successful future. The editing and publishing of a medical journal on a basis equally just to subscriber, to advertiser, and to editor and publisher, is an undertaking the magnitude of which is often unknown to beginners in medical journalism.

STOMATOLOGY.

There are in the United States fifty-three Dental Colleges, with about sixteen hundred graduates now practicing oral surgery. Many of these have previously acquired the M. D. degree and are, therefore, qualified to speak on the subject, and their testimony is to the fact of a woeful lack of dental knowledge on the part of the general practitioner; the aurist, the occulist, the throat specialist and others, coming in for a share of the criticism, on the same grounds.

The dentist is made painfully, if not disgustingly, aware of this paucity of knowledge of the oral cavity, when persons drift into the dental chair, who, as Dr. Branigan of Baltimore, says, have been "stabbed in the neck and face" for abscesses in those regions, leaving a "hideous scar" for life, after much suffering, all of which could have been prevented by attention on the part of a dentist, at the proper time, to the third molar teeth.

Patients have suffered many things of different men for very painful and very obscure ear troubles, who have been promptly relieved and cured, when as a dernier ressort they have called on a dentist, who removed the old filling from a pulpless tooth. An inflamed tooth has caused such an irritation in the eye that glasses have been fitted and worn, eye-washes used, tonics prescribed, in vain, the cause of the trouble not being apprehended, when at length a dentist has discovered the "source of the Nile," and promptly put a stop to it. A miniature stone in the pulp of a decaying tooth has been the cause of a neuralgia, which has persisted for months in spite of the most skillful treatment along that line, which acquirable dental knowledge would have almost entirely prevented. "These things ought not to be." They are a reproach on our fair name and fame.

A first-class M. D., D, D. S., in a few lectures during the senior course before graduation, would put each man on the track for the acquisition of that knowledge which would make these blunders impossible, as they are now inexcusable.

THE YOUNG MEDICAL GRADUATE.

At this time of the year when commencement exercises, both literary and medical, are attracting much attention, we are reminded of the by-gone days when we left our alma-mater to commence our medical career in this wide and wicked world. Many weary and happy hours had been spent for a few years in preparing for the ordeal which was before us.

Having used up the small allowance allotted to us in preparation, the future now stared us in the face and our only weapons of defence were the hard-earned "sheepskin" with our physical and mental endowments; but hope was high and we built many air castles, believing that the first year's practice would bring us in many thousand dollars. Alas! we were doomed to be disappointed, when at the end of the first year we had no bank account, and our expenses were barely paid; but we did not despair, we were learning a lesson, and after many years of hard work and experience we can say to the young medical graduate that you have chosen a noble work and one in which you can be of untold benefit to mankind, but in this work, as in others, we must commence at the bottom of the ladder and gradually work up. We have many competitors who have the same privileges that we have and who are worthy of our respect, and we also have many humbugs and quacks to contend with who are beneath our notice; but let us labor on for the good of humanity and we will finally gain our just reward in the profes-

sion which we have chosen. We may not gain a financial reward; perhaps we will be called to a field where the "filthy lucre" is scarce, and owing to our inability to own the necessary equipments we may be compelled to send some of our best patients to the specialist who will take both the pay and the honor; but press on, victory will come at last, and we can look back over the rough road which we have traveled and say with the poet:

"If what shone afar so grand,
Turn to nothing in thy hand,
On again; the victory lies
In the struggle, not the prize."

BOOK REVIEWS.

CLEVENGER'S MEDICAL JURISPRUDENCE OF INSANITY or Forensic Psychiatry; two volumes 1,300 pages. Price, in best Law Sheep $12; in Cloth, $10. The Lawyers, Co-operative Publishing Co., Rochester, N. Y.

This is the first time in sixty years that an alienist of nationnl reputation has prepared a systematic treatise on this subject. It is accompanied by an exhaustive presentation of all the decisions of all the courts upon the questions involved.

The author Dr. S. V. Clevenger, of Chicago, is a well-known alienist, the Consulting Physician for Mental and Nervous Diseases to the Alexian and Reese Hospitals, Associate Editor of "The Alienist and Neurologist," author of "Comparative Physiology and Psychology," and "Spinal Concussion." He was formerly Medical Superintendent of the Illinois Eastern Hospital for the Insane, and Pathologist of the Cook County Insane Asylum, Chicago. F. H. Bowlby, of the publishers' editorial staff gives an exhaustive presentation of adjudged cases on the questions involved.

It furnishes in the distinctively medical part of this work, to the lawyer, in detail, symptoms by which insanity may be predicated or mental responsibility proved. The question of sanity or insanity is one of fact, to be proved as a conclusion from evidence. What facts are significant? This is only to be shown by the consensus of experts, based on the world's experience. The author answers these questions from a lifetime's study of the insane, and of the world's literature of psychiatry, French, English, German, and Italian.

The purely legal part of the work comprises the decisions upon the tests, evidence, and presumptions of insanity, the mental capacity to contract, marry, or make wills, the effect of insanity on the relations of partnership, agency, or marriage, and also in all criminal offenses. The law as laid down by the courts is nowhere given nearly as complete a presentation. There has been added to the work, as an invaluable feature in this connection, an *appendix on the use of scientific books and treatises as evidence.*

In the trial of actions, civil or criminal, it frequently becomes necessary for the lawyer and medical witness to traverse every aspect of this subject. This work is at once an intelligible and trustworthy expert for the lawyer, and a conscientious and thorough adviser for the physician.

YELLOW FEVER. Clinical Notes. By JUST TOUATRE, M, D. (Paris). Translated from the French by CHARLES CHASSAIGNAC, M. D. New Orleans Medical and Surgical Journal, Limited. 1898.

This book appears at a most opportune time. We had an epidemic last year and at this early season another epidemic seems probable. The author has lived in New Orleans more than thirty-three years and has given this subject careful study. He lays great stress upon the question of temperature, in yellow fever, which regulates everything, the diagnosis, the prognosis and the treatment. Forty-six clinical charts of the pulse and temperature are published together with the bedside observations and comments thereon; they form an interesting collection, as they include all types, forms and varieties of yellow fever, at all periods of life. A long chapter has been written on the yellow fever of children, with observations. There has been some question as to whether this disease existed in children. Any one who has had any doubt about the existence of this disease in children will no longer be in doubt if they will only read this book. The author gives his treatment very minutely and the reasons why. He says the pessimism that everything has been tried, nothing has succeeded is heartrending, as well as entirely false. The work is a very complete treatise on the subject.

A PRACTICAL PHYSIOLOGY. A Text-Book for Higher Schools. By ALBERT F. BLAISDELL, M. D. Ginn & Co., Publishers.

It gives us pleasure to recommend this complete, compact and practical manual of physiology and hygiene to the needs of students in high schools, normal schools and academies. In the first twenty pages of the work is given a good introductory. Following is given chapter by chapter the various subjects treated in Physiology, viz.: the bones, muscles, physical exercise, food

and drink, digestion, the blood and its circulation, respiration, the skin and the kidneys, and the nervous system. Each chapter gives the main facts necessary for a clear understanding of Physiology. The last chapters in the work are devoted to the subjects of the Special Senses, Accidents, and Emergencies and Experimental work in Physiology. At the close is found a good Glossary. The work is in every sense a fine book for students. It is easily handled and up to date in every respect.

SCHENCK'S THEORY. The Determination of Sex. By DR. LEOPOLD SCHENCK. Professor at the Imperial and Royal University, and Director of the Embryological Institute in Vienna. The Werner Company, Chicago, New York. 1898..

This book contains vast and wide reaching literature upon this subject. The observations that have been recorded by others are here followed by methods of investigation and by considerations which may serve to elucidate the facts. The work contains something over 200 pages of well written material. The author handles his subject well. At the close of the book a section has been dedicated to the methods which the author recommends for the artificial influencing of sex. Some particular experiments are subjoined. The book is a production of careful thought.

HUMAN AND BOVINE TUBERCULOSIS: By E. F. BRUSH, M. D., of Mount Vernon, New York, Wynkoop Hallenback, Crawford Co., New York. 1898.

This little volume is a reproduction of papers presented to the medical profession during the past ten years. The first section considers Bovine Tuberculosis, the second, the Relationship Existing between Human and Bovine Tuberculosis, the third, on the Coincident Geographical Distribution of Tuberculosis and Dairy Cattle. The last section, which is the most valuable, is What Must We Do to Be Saved from Tuberculosis? The work deserves a careful reading.

MILK: By E. F. BRUSH, M. D., Wynkoop Hallenbeck, Crawford Co., New York. 1898.

The very first lines in the opening of this book are very true. The position that milk occupies in scientific works at the present day is very unsatisfactory to the medical practitioner. This volume is a collection of essays contributed to various medical journals and societies during the past seventeen years. The author treats the subjects Milk, Acute Milk Poisoning, Infant Feeding, Fermented Milk and several other subjects of equal interest and importance. The work comprises a volume of 126 pages.

HAY-FEVER AND ITS SUCCESSFUL TREATMENT. By W. C. HOLLOPETER, A. M., M. D. Philadelphia: P. Blakiston Son & Co., 1012 Walnut St. 1898.

This little work of 130 pages is a nice treatise on the subject of Hay-Fever. The writer has given it many years of careful study and has successfully treated over two hundred cases in his private practice. He gives a complete history of the disease, its exciting causes, predisposing causes, pathology and treatment. The book is well printed and neatly bound, and is a most useful and saleable little work.

DISEASES OF THE SKIN, their Constitutional Nature and Cure. By J. COEPTON BURNETT, M. D. Third Edition, Revised and Enlarged. Philadelpia, Boericke & Tafel, 1898.

This book contains 264 pages, and is divided into three divisions. Each division is well considered. The author lays great stress on the great importance of keeping the skin in a healthy condition and the fact is emphasized that this cannot be done by soap and water alone. The last division is devoted to the constitutional cure of Alopecia Areata.

NAPOLEON III. and his Court. By Imbert de Saint Amand. Translated by Elizabeth Gilbert Martin. 12mo, pp. 407. New York: Charles Scribner's Sons. $1.50.

This volume by M. Saint Amand exhibits the second French Emperor at his best. It gives the happy side of Louis Napoleon's life during the years 1853—56. This is the triumphant period of his life. The writer gives a fine character sketch of the life of Napoleon, showing his many amiable and excellent traits. Among the important international events of these three years were the crimean war and the Paris Exposition. The work is highly interesting and very valuable from an historical standpoint

BIOGRAPHY. By THOMAS WENTWORTH HIGGINSON. 12mo, pp. 374. Boston: Houghton, Mifflin & Co. $2.

There is probably no living American whose life has been richer in interesting incidents and who can write more fittingly or more forcefully of Cheerful Yesterdays than Col. Higginson. He tells in his own interesting way of a Cambridge boyhood, a child of the College, the period of the Newness, etc.

"The Birth of a Literature" gives pleas-

ing glimpses of the personal relations that existed between the most famous members of the Atlantic School. Then follow chapters on "Kansas and John Brown" and "Civil War," dealing with episodes less fitly grouped among the "Cheerful Yesterdays," perhaps, and yet not lacking in humorous suggestion. Hardly less entertaining are Col. Higginson's reminiscences of his own participation in public affairs since the war.

LITERARY NOTES.

Lippincott's Magazine for July, 1898.—The complete novel in the July issue of Lippincott's is "Harold Bradley Playwright," by Edward S. Van Zile. This diadatist is no hack, but a man of marked ability, culture, and character: the rehearsals of his play brings to the front a brilliant thought previously obscured actress, who proves to be also an original and charming personage. The scene is in New York, and the story is Mr. Van Zile's best work thus far.

"A Limit of Wealth," by Frank H. Sweet, deals with a returned Klondiker of modest views. Mary Agnes Tincker's "An Evening in Rome" introduces the Abbé Liszt. "Their Great Crisis," as recounted by Nathaniel Stephenson, is that of three young lawyers.

Under the heading, "A National Derelict," Fred. Perry Powers sets forth the decadence and obstructiveness of Spain. William Ward Crane writes on "Names of War-Ships."

"John C. Calhoun" is painted, fron a southern stand-point and in his private life, by Charles Cotesworth Pinckney, D.D., whose reminiscences are of value as those of a neighbor who knew his subject well.

Anne Stuart Baily furnishes an interesting account of "An Old Virginia Resort," the Sweet Springs. Sundry hints on Cheap Trampings in Switzerland," liable to be of value to the impecunious traveller, are given by Alvan F. Sanborn.

A partial history of "The Wagner Cult" in America comes from Philip G Hubert, Jr. Little Barr Morgan writes pleasantly of her "Feathered Friends." Dr. Charles C. Abbott, who is always a naturalist, praises "The Unlettered Learned."

"Zola as an apostle of Temperance" is considered by Professor Victor Wilker, who, while not defending the great novelist's excessive realism, takes the ground that his work is no less really than professedly that of a moralist. Theodore Stanton presents a somewhat extended list of American "Literary Men as Diplomatists.

The poetry of the number is by Jenny Terrill Ruprecht, Mary Kent Davey, Grace Shoup, Carrie Blake Morgan, and Madison Cawein

The July Forum.—All the articles in The Forum for July are particularly "readable"; and there is not a dull paper in the issue. While so much biographical matter relative to the late Mr. Gladstone is being presented to the public by the press and the magazines, The Forum has for its leading article a sketch of the deceased statesman by Mr. Justin McCarthy, M. P., written four years ago with the stipulation that it should not be published till after Mr. Gladstone's death. Mr. McCarthy says: "I am not writing a biography of Mr. Gladstone. The public life of Gladstone belongs to history, and is open to the study of anyone and everyone. I am rather desirous of telling in a cursory sort of way how that life began, how that career was directed from its beginning, how the nature and the genius of the man asserted themselves, how he came to slough old beliefs and to cast away old prejudices, how as Bright said of him, he was always struggling toward the light. My idea is to make a study from personal memory of the man rather than a chronicle of his career." From these avowals of the author it will be gathered that Mr. McCarthy's article makes exceptional interesting reading."

The Review of Reviews continues strong on war topics. In the July number the editor reviews the whole campaign up to the landing of our troops for the advance on Santiago, showing the precise part which Lieutenant Hobson's exploit had in the general scheme; Dr. William Hayes Ward treats of Hobson's career as that of the typical young American student; Mr. Edwin Emerson, Jr., the brilliant young newspaper correspondent, gives notes of his adventurous journeyings in Porto Rico last month; and Dr. Max West, the statistician and economist, summarizes "Our New War Taxes" in an interesting article. "International Cartoon Comments on Our War with Spain" and the "Record of Current Events" also cover the situation up to date.

Phil Robinson, the war correspondent of the Pall Mall Gazette, whom the Spaniards have put into jail at Matanza, is one of the cleverest writers on out-door subjects in the English magazines. His latest contribution "Some Notable Dogs in Fiction" is reprinted in The Living Age for July 11, from the Contemporary Review.

OBITUARY.

Dr. Robert Gibbon was born at Holmesburg, Philadelphia, Dec. 30th, 1822. He moved to Charlotte, N. C., in 1838, when sixteen years of age.

Having from his earliest years entertained strong predilections for the medical profession, and having made up his mind that this was the sphere in which all his ambitious dreams were to be realized, he took a preparatory course at Harvard College. Here he received the rudiments of his education, and afterwards graduated at Jefferson Medical College, Philadelphia, in 1847.

He began to practice medicine at Lancaster, S. C., and in 1849, moved to his former home, Charlotte, N. C., where he soon acquired a lucrative practice, many warm friends and an extensive influence, and continued actively engaged in his profession up to 1895, when the excellent health with which he had been blessed began to give way, symptoms of fatal disease appeared and he gradually declined and died May 14th, 1898, ripe in years and eminent in his profession.

While a pains-taking and judicious practitioner of medicine, his name was widely and favorably known to the medical profession of his own community and the State, and he was regarded as one of its most skillful surgeons.

Dr. Gibbon entered the Confederate army in 1861 as regimental surgeon (28th N. C.) and was soon afterwards made brigade surgeon. During the latter part of the war he had charge of the army hospital at Charlotte.

He was married in 1865 to Miss Mary A. Rogers, of Charleston, S. C., who died in 1876. Two children were the result of this marriage—Dr. Robert L. Gibbon, a well and favorably known physician of Charlotte, N. C., and Dr. John H. Gibbon, a rising young surgeon of Philadelphia. In 1878 he was married to Mrs. C. M. Harris, of Laurens, S. C., who still survives him.

He was President of the Charlotte Academy of Medicine for several terms. During the last ten years of his life was local surgeon for the Southern Railway Company. He was the oldest living member of the North Carolina Medical Society at its last meeting in Charlotte, May, 1898, having joined that Society in 1859. On the day of his death there was a called meeting of the Charlotte Medical Society and resolutions of respect passed, and a motion to attend the funeral in a body.

Another of the rapidly diminishing courtly old school of practitioners has been called to his rest. Let us hope that as one by one God calls them away from the scenes of earth, the places made vacant here will be filled by those who will make the profession what it has been in the past.

The Treatment of Chronic Bright's Disease.

Dr. W. Ewart (Royal Medical and Chirurgical Society, Jun. 28, '98) read a paper with this title. He said the methods of treatment, medicinal and general, hitherto adopted in tubal nephritis had not proved curative of the disease nor always of its symptoms. (British Medical Journal.) On the other hand, the complete and apparently spontaneous recovery of some cases after long periods of ineffectual treatment showed that the lesions were not necessarily incurable or fatally destructive of the renal structure or function. The cases under consideration were strictly those of uncomplicated tubal nephritis with dropsy, a disease which left no permanent lesion behind it, and which might be regarded as an inveterate epithelial catarrh. In other varieties of kidney disease, this epithelial catarrh was only one of the features; they presented more or less intertubal and Malpighian congestion and cellular proliferation, and various degrees of fibroic proliferation throughout the organ. Their treatment was much less hopeful. In them, as also in the purely tubal nephritis, the albumenuria was a separate factor; and this was not necessarily amenable to treatment which might prove curative of the dropsy. The group of "acute nephritis" presented great analogy with that of chronic tubal nephritis, and the indications were largely the same; but the treatment could only be referred to incidentally. The usual well-known features of tubal nephritis were: (1) the dropsy; (2) the anæmia; (3) the oliguria; and (4) the cachexia and marasmus, disguised by the persistent œdema, and paving the way to fatal complications or exhaustion. The treatment to be described was based upon a consideration of these symptoms, and particularly of the œdema. Dropsy might be considered as Nature's protection and remedy against fatal intoxication; but also, if not dealt with therapeutically, as Nature's difficulty and danger. In itself œdema was harmful when persistent by oppressing the tissues, choking the lymphatic circulation, and impeding metabolism. So long as it persisted it hindered nutrition both locally and in general. Its usual treatment by horizontal rest in bed further depressed the vital functions. These were the systematic evils of œdema. Another set of results affected the

kidney itself, the impeded nutrition of which was rendered more difficult by the absence of a free lymphatic flow. By virtue of this persistent œdema tubal nephritis became a lymphatic disease, and its treatment might properly be considered from the point of view of the lymphatic system. The indication was to relieve the lymphatic system of the œdema over as large an area as possible, and to ensure its escape by systematic drainage. This was to be effected by posture, since gravitation told upon renal dropsy, although less than upon cardiac œdema. The œdema should be allowed to collect in the lower limbs by slanting the bed; and meanwhile the trunk and the upper limbs, relieved of their puffiness, could be restored to healthier action by massage. Acupuncture, or incision and drainage afforded positive relief to the œdematous tissue of the entire body, to the serous cavities if previously occupied by fluid, and to the lymphatic circulation. They also fulfilled the first indication, that of removing from the body the accumulation of contaminated fluid. Moreover, if persevered in systematically, this treatment satisfied the primary indication of physiological rest to the kidney by opening up another channel of exit for the ingested fluids. The lymphatic system then became to a great extent the channel of emunction. A surcharge of the blood with alimentary and with effete products being largely obviated, a varied and sustaining diet could be prescribed, and on the strength of the latter a larger share of renovating exercise might be allowed than was otherwise possible. It had been shown by Hamilton that the inflammatory products of nephritis were largely removed through the lymphatics of the kidney, a mode of relief analagous to that observed in pneumonia. This observation was in harmony with the *rationale* of the method now advocated, and it suggested that a free lymphatic circulation was an essential part of the treatment of the kidney in nephritis. The broad indication which had suggested itself to the writer was to place every function in the most normal condition possible in order to assist Nature in repairing the local damage. It had seemed to him that the prevailing methods had failed: (1) By not systematically relieving the œdema, but rather promoting its permanence all over the body; (2) by imperfectly carrying out the indication of physiological rest to the kidney; (3) by endeavoring to obtain diuresis by medication, and to influence the tissue changes by alteratives, at a time when the nutrition of the kidney as well as its function were in abeyance, whilst the treatment by sweating and by purging had often proved an additional trial to the strength; (4) by neglecting the measures both of hygiene and of diet which were most likely to restore normal strength and nutrition to the system constitutionally, and locally to the kidney. The special objects of the treatment proposed were: (1) To unblock the lymphatic ways choked by œdema; (2) to establish a thorough flow from the blood, and particularly from that of the renal district, into the lymphatics, whereby soluble solids and toxic products might be removed; (3) to quicken artificially the lymphatic circulation by passive movement, general massage, etc., so as to favour nutrition and metabolism of the entire body, and by that means of the kidney also. Where the œdema was general or localized elsewhere, the first indication was to bring it down to the feet by slanting the bed. Southey's tubes, or small incisions where these could be made into dilated lymphatics, preferably at the back of the ankle, were the means of draining the œdema. Every antiseptic precaution must precede the operation and must be kept up throughout the case, the part being kept covered by antiseptic dressings, and the entire foot below being vaselined to prevent soakage of the skin. Large quantities of fluid might be got rid of in this way. Whilst the flow continued a liberal diet could be adopted, the chief aim of the treatment being to raise the patient's strength; but it might be necessary at times to return for a few days to a strictly milk diet. This would help to restore an abundant flow where the latter tended to dry up. A moderate allowance of tonic wine, such as Burgundy, St. Raphael, or claret was part of the dietetic treatment. The patient in any recent case would soon be able to sit up and subsequently to walk about the room. Where prolonged illness had preceded the application of treatment, active exercise would have to be carefully adjusted to the gradual return of strength. The ordinary rules applied as regards treatment of the liver and of the alimentary canal. One great object of this treatment was to restore cardiac energy and nutrition, which ultimately tended to fail. This object being partly attained, drugs could be tried with much better results. Digitalis might then assist both the heart and the kidney. Iron, indicated by the anæmia, would be better borne, and such drugs as mercury and arsenic as well as the bitter tonics would be tried with much greater prospect of success. The treatment described was specially devised for cases of dropsy. The advantages to be gained from it were not, however, necessarily restricted

to such cases. Uræmia, occurring without dropsy, was treated by the removal of so much blood. Analagous relief might be secured without the sacrifice entailed by venesection if a sufficient flow of lymph could be obtained by artificially setting up dropsy of one or both lower limbs. He had succeeded in fulfilling this indication in a base where the œdema was exceedingly slight, although affecting the face as well as the lower limbs. The case, not presenting urgent symptoms, did not justify severe measures; nevertheless, the artificial œdema was kept up for twelve days, and the flow obtained through a single incision continued seven days, although it was never very considerable. The local œdema was obtained by the diffused pressure from a tourniquet applied over cotton wool and cardboard to Scarpa's triangle. Martin's bandage was susequently substituted for the tourniquet. The treatment suggested addressed itself indirectly to those conditions which kept up albuminuria independently of nephritis, and to the restoration of that part of the renal function supposed to be concerned with active internal secretion; and it claimed merely to be an endeavour to assist vicariously the excretory mechanism of the kidney. It was felt, however, that if this indication could be fulfilled, the other renal functions would benefit in a large proportion also.

Multiple Syphilitic Neuritis.

Dr. Frank R. Fry (American Neurological Association, May 27, 1898,) read the notes of a case of this sort. A man, thirty-two years of age, contracted syphilis in the fall of 1896. A year later he had a sudden right hemiplegia, the face escaping. The paralysis was slight, the patient walking with a hemiplegic gait and retaining considerable use of the hand. The knee jerk and the wrist jerk on the paretic side were exaggerated. Three weeks later a paraplegia developed, which became complete and was followed by marked weakness of the hands, with hyperæsthesia and paræsthesia in all the extremities. The knee jerks were lost, and later there was reaction of degeneration in the muscles of the legs. After eight weeks improvement began, and it had been continuous. He had since been able to resume his business. The diagnosis was based on the characteristic sensory symptoms—reaction of degeneration, absent knee jerks, the extensive distribution and peripheral character of the paralysis, and the manner in which the paralysis and sensory symptoms cleared up, leaving no evidence of focal lesion of the central nervous system. It was assumed that the neuritis was due to syphilis, because no other cause seemed apparent. There was nothing in the patient's habits or occupation which predisposed him. He was not an alcoholic and had no rheumatic tendency. Mercury was used by inunction, but a severe constitutional effect was not produced, nothing more than a slight sensitiveness of the teeth. The drug produced no cachexia or local lesions in the joints or elsewhere, although it was used freely after the neuritis appeared.

Progress in Laryngology.

Dr. Dundas Grant, in his address as president of the British Laryngological Association, gave a comprehensive review of recent progress in all the lines of this department (Journal of Laryngology and Rhinology.) He paid but small tribute to transillumination. Of autoscopy of the larynx he stated that the principle introduced by Kirstein contains much essential truth, and that while it can never replace laryngoscopy, it affords, with some limitations, a distinct aid.

While there has been abvance in the neurological aspect of laryngology, there still remain a certain number of laryngoplegias, especially unilateral, whose origin is shrouded in obscurity. Recently the interesting disease known as syringomyelia, or glioma of the spinal cord, has been thought to be accompanied in many cases with affections of the upper gray tracts, and we may have ocular, laryngeal, pharyngeal and other paralyses. The speaker mentioned having seen two cases recently which he believed answered the discription of alcoholic neuritis of the recurrent laryngeal nerve.

The speaker laid much stress upon the influence of disease of the nose in producing various forms of laryngitis. In simple nasal obstruction, the mere obligation to breathe through the mouth is of itself sufficient to determine a congestive condition of the laryngeal mucous membrane. In supperative nasal disease we have the inhalation of pus microbes producing maceration, proliferation, and in some atrophy of the mucous membrane. He believed suitable and properly conducted vocal exercises and respiratory drill of the utmost value in the therapeutics of congestion of the larynx, and he has found of great value the exercises recommended by Dr. H. Curtis in his recent work on "Voice Building and Tone Placing." In concluding that portion of his address dealing with laryngology, he placed a high value upon antitoxin in the treatment of diphtheria, advised caution in its use, and the avoidance of any undue

enthusiasm calculated to bring serum therapy into ridicule. He was strangly silent about intubation.

Mitigating Crime.

HOUSTON, TEXAS, June 22, 1898.

DRS. REGISTER & MONTGOMERY,

Charlotte, N. C.:

Gentlemen:—Your kind note, honoring me with a request for a paper to hand, and in reply must say that I was rather puzzled at your limitation of my article until I examined your Journal—its astonishing role of able contributors, the repleteness of their dissertations, fresh and rich with profound scholarship and scientific ideas. The style of your Journal is certainly neat and chaste, and you are perfectly justified in throwing restrictions over the literature that is to go into it. The public demands quality these days, not quantity.

When your letter arrived I was cogitating over the probable possibility of mitigating crime in the land. This thought was brought about by a boy passing my door, whose father was hung for murder. Why is it that some scientific man does not take hold of the subject so-called phrenology and treat of the brain delineations with truth and candor? "relative to human character." That principle and depravity depict themselves on the escutcheon of man, is as true as it is hard to understand, but that one can look at the boy and depict the animal predominating in his general contour as easy as to determine his gender by his voice is not to be disputed. Now I believe if that boy was turned over to a man of learning, of industry, good morals, and sound judgment with additional instruction from some one who knows more than I, as to his diet, the amount of physical labor prescribed so many half hours each day in mental work with proscriptions as to moral suasion, backed by elbow and hickory grease, and for old Billy Johnson to come quietly in at the side door every other night and pray for him, feed this boy with but little meats other than fish and the hams of rabbits. Give him fish balls, but not of cod, white fish and silversides; feed him plentifully of eggs until he arrives at the age of puberty. Then withhold them. Give him no milk from the cow, that grazes in the mesquite valleys of Texas for fear he bucketh when the crupper of industry be applied. Feed him no Boston beans lest he soon knoweth too much to be taught anything; and after puberty grabble for him no potatoes from hard-by the roots of the palmetto stalk, lest he ultimately invade some sanctum of chastity. Press him closely to the udder of rich yellow milk of human kindness with one hand and with the other drive into the gluteal region. The renowned emollient elbow and hickory grease cooleth his blood thrice weekly with the phosphites of *hydrowashy* and in regard to his course of studies, hold him in training until he becomes proficient indeed, in English, Latin, and mathematics, then give him a smattering of geography, and turn him free, for you will have tided him over the rubicon of savage proclivities. You will have loosed up the restrictive folds of his brain, and by exosmoses driven out the hæmatin and by endosmoses you will have replaced with phosphorus. That which was red will have become gray. And if you convince me that he has mastered English, Latin, and mathematic, I will go on his bond that he break not the peace by combatativeness, and I will vouch as much for his good citizenship. If this prove a success with young Shaw, then let us appeal to Hanna and McKinley for power of attorney over the trumpery of Manila, convert it into money, employ twelve scientific young men, put them to studying the anatomy and physiology of the brain, its delineations, sections, and bearings to the physiognomy and contour of facial expression. Let this be done without the blather, bombast, and gush of Fowler's writings, or of phrenology, so-called, and when they have become experts in phrenology, *per see*, start them gathering up the progeny of criminals of every character, and place them in the house of restitution, and they, as experts, will soon come to know one at sight, and on examination, they will be able to give a minute discription of the peculiar character of the criminal, the child's parent is or was, and being backed by the government can place the urchin in the cushioned patrol wagon and bring him in.

Carry him through the regime, or above stated proscription of labor, manual and mental, with the proper restrictions in hygiene, emollients, of elbow and hickory grease, with the prayers of old uncle Billy Johnson every other night, and I believe we will be able eventually to turn all of our jails into houses of restitution, and our penitentiaries for State Fair grounds.

I love North Carolina for the many brave soldiers she sent to the Confederate army. I also love Charlotte for the emigration of an extraordinarily large family, by name of Terry, who settled in my neighborhood when I was a boy. They were a jolly, good people.

Most respectfully,

F. M. DAVIS, M. D.

Milk Poisoning Due to Pasteurised Milk.

Koplik in a recent edition of the Medical Record speaks very unfavorably of the use of Pasteurised milk as a food for infants and children. Pasteurisation of milk is a process which did not obtain the sanction of the master whose name it bears. Germs will always exist in milk obtained even from dairies. The milk given to the vast number of our infants in large cities will be milk which, even if free from bacteria of disease, like tuberculosis, diphtheria, typhoid fever and scarlet fever, will still have a supply of bacteria indigenous to the milk, which must always be reckoned with. These are the baceria to be considered as etiological factors in the causation of gastro-intestinal disorders of infancy and childhood. The most deleterious of these germs are not affected by Pasteurisation as at present carried out.

These develop in certain cases fed on Pasteurised milk a distinct set of symptoms, sometimes insidious, sometimes marked and troublesome, to which Koplik applies the term "milk-poisoning." In many cases the first symptom will be a looseness of the bowels. Children who have had only one movement or a constipated movement will suddenly have five, or six or seven loose movements. At first the movements will have a yellow, curdled, lumpy appearance and a distinct acid odor, or they will have an admixture of green and an intensely disagreeable odor. Such an infant is restless, has colicky pains and a slight rise or no rise of temperature. In other cases the baby, who is in apparently good health, with three or four normals stools a day, will have a large number of greenish, ill-smelling movements of a very acid character and then after a dose of oil will relapse to a normal state. In other cases children will have one to three movements a day, followed by a large semifluid movement of extremely acid character and a distinctly penetrating sour odor. After such a movement the patient feels weak. In some cases the movements are simply increased in number for that patient. They are normal in color and odor, but more fluid than they should be, and the patient does not seem to increase in weight. There may be a slight rise of temperature toward evening. The treatment for all these cases is the substitution of sterilised for Pasteurised milk.

So far as a study of waste products can teach, Dr. Koplik has found little difference in the digestibility of raw, Pasteurised or sterilised milk, continuously prepared or modified in the same way, when administered to the same infant.

Sterilisation in the household must be carried on in a closed steam sterilizer, where the temperature reaches 100 deg. C. or close to this point. The milk should be maintained at this temperature for at least ten minutes. The milk should be cooled and then kept on ice or in a refrigerator below 20 deg. C. until given to the infant.

Enlargement of the Lingual Tonsils a Cause of Cough.

Dr. Beverley Robinson, of New York, read a paper on this subject at the recent meeting of the Laryngological Association. He said:

It has been recognized that enlargement of the lingual tonsil is a cause of cough, although few appreciate the fact. Its beginning was insidious, especially in young adults. If the cough lasted for only a few hours the general practitioner usually examined the chest and then examined the throat; this examination being negative, he concluded that it was a stomach or a reflex cough, The doctor emphasized the point that impaired condition of general health and a continuance of a catarrhal relaxation were predisposing causes. Anæmia, constipation, and habitually irregular habits as regards food and rest were responsible for this condition. Overfeeding and indulgence in cake in children caused congestion of the lingual tonsil. Rheumatic dyscrasiæ, frequently found in adults, were causative factors which must be attended to. The symptoms of acute congestion of the lingual tonsil were mainly those of an irritative cough, and there was little to be learned on inspection. At first there was some expectoration, later it became thick muco-pus, and later still there was found blood, which came from an inflamed lingual tonsil. All the symptoms were worse at night. Sometimes the patient went to bed and slept from one to three hours, when he was aroused by a cough which anodynes failed to relieve, except for a short time. The writer had noticed that the tonsil appeared red and swollen, and in his observation the left side was more frequently enlarged than the right. He had found the fossa completely filled by a swollen gland, which overlapped the border of the glottis. It should first be determined if any underlying dyscrasia was present, and if it was this should be treated. Gout and rheumatism should always be considered. Swollen lingual tonsils were unaffected by cough mixtures. External medication could not be relied upon. The compound tincture of iodine, with an equal amount of glycerin and water, applied every day, might reduce the size and generally acted well. Change

of air was a very essential thing in the treatment. If there was marked renal deficiency, spirits of Mindererus was useful. If there was a malarial element, the use of Warburg's tincture was of benefit. For hypertrophy of the tousil Dr. Robinson recommended, first, the electro-cautery; second, the snare; and third, ablation by means of the tonsillotome.

Medical Examinations.

At this time of the year hundreds of young men, who have spent from three to seven years in preparing themselves for the practice of medicine as a life work, come before the various licensing boards of the different States for permission to practice. Let us suppose that they have worked faithfully in their preliminary training, as well as in the medical schools from which they have received their diplomas. What kind of treatment have they to expect from the State Boards who are the courts of final appeal?

We must confess that in every instance the examinations by the board seem harder than fairness would require. Many of the questions would puzzle an expert to answer, and too often we have noticed catch questions. This is not fair to the applicant. When a graduate of a reputable medical college comes before an examining board he has a right to expect every opportunity to prove himself able to practice medicine, and should not be compelled to pass such an examination as would probably stump nine-tenths of the physicians in the State. Take, for example, the published questions of the North Carolina State Board, and let any physician, no matter what amount of experience he may have had, try to answer them one by one, and we are sure that few could pass successfully. On Anatomy, on Physiology and on Chemistry the questions are fair; on Obstetricts, on Gynecology, on Practice and on Materia Medica the questions are very comprehensive and often very difficult to answer satisfactorily in a written examination. The questions on Surgery would require a book to answer properly, covering as they do nearly the entire field of surgery in one way or another. In Pediatrics we find but two questions, one a very good one, but the other evidently a catch question that would trip nearly every one. Very few physicians could describe "Noma" without recourse to the text books, it is a very rare disease, and far more rarely described by that title. It seems to us unfair to make half of the examination on this branch hinge on that catch question. We have noticed similar instances in other examination papers, but this comes closer home to us, and so we consider it most worthy of mention.

Let the Boards treat the applicants with fairness. It is not a criminal offence to want to earn a living by the practice of medicine; and it is a very serious matter for a man who has spent all that he could save in his endeavor to get his diploma to be told that he cannot practice his profession because he does not know all of the refinements and technicalities that the board examinations too often call for. We admit that the profession is over-crowded; we admit also that there are too many schools, many of which give diplomas to unworthy candidates; these can readily be detected by much less rigorous examinations than are now in vogue. We wish too to uphold the dignity and authority of the State Boards, but we feel compelled to warn those bodies that they can injure themselves by being too rigorous and exacting, and so bring into discredit an institution that should work for the good of the whole profession.

Charles O'Donovan, M. D.
10 E. Read St., Baltimore, Md.

Contribution to the Study of Paralysis in Diphtheria.

Katz, according to Medicine, has published the result of his pathological research in three cases of death from paralysis in diphtheria. He examined very carefully the whole central and peripheral nervous system in each case. The basal ganglia, internal capsule and cerebral cortex showed no changes; but in all three cases, especially in the first, alterations were evident in the structure of the ganglionic cells, the peripheral and central nerve fibres and muscles, accompanied by more or less marked changes in the spinal chord, medulla oblongata, and pons. Of the cranial nerves the oculomotorius, trochlearis, abducens, facialis, glossopharyngens, hypoglossus and vagus were more or less diseased. The peripheral nerves were moderately diseased in only one case; the phrenic nerve was extensively diseased in another. Hemorrhages in the nervous system were seldom found. A varying grade of fatty degeneration of the muscle fibres of the diaphragm was present.

To summarize his findings, the most prominent pathological feature was disease of the ganglionic cells, manifested either in direct necrosis or in reparable degeneration. In the milder grades of ganglionic cell disease, the medulla of the nerve fibres was slightly affected. The degeneration occurs

usually earlier and with more marked severity in the medulla oblongata than in the spinal cord. Due consideration must be given the fact that disease of the medulla oblongata is more readily detected than that of the spinal cord.

Clinically, the pathological disturbances in the nervous system are manifested during convalescence in recoverable pareses, weakness, loss of appetite, slight tremor, and apathy. Paralysis of the soft palate is particularly common, since in addition to nuclear involvement the part is affected locally. The changes in the nervous system arise through the action of the diphtheria toxins. The cell activity may be disturbed immediately, but as a rule not until degenerative changes appear.

Antidiphtheritic Serum and Diphtheria Albuminuria.

C. H. Spronck, says the American Medico-Surgical Bulletin, that:

1. A subcutaneous injection of 10 c.c. of antidiphtheritic serum, or the serum of a non-immunized horse produces in a healthy rabbit of from 2 to 3 kilos, a very slight albuminuria which persist for twenty-four hours only, and results simply in the passage of a small quantity of serum-albumin through the renal filters.

2. The amounts of this albumin is greater and it persists longer following a diphtheritic albuminuria in the rabbit; also if the rabbit has just recovered from a simple albuminuria.

3. The antidiphtheritic serum exercises no unfavorable action on such albuminuria, even when injected in large doses.

4, On the contrary, this serum exercises a favorable action if it is injected from the start of a diphtheritic albuminuria, or during thirty-six to forty-eight hours after the onset of such a complication.

5. Finally, the anti-diphtheritic serum is incapable of promptly arresting a complicating albuminuria, yet it can materially modify its course for the better and diminish the intensity and duration of the process.

The Use of Digitalis in the Treatment of Diseases of the Heart.

Sir Richard Douglas Powell (Lancet) remarks that the commonest mistake that one observes in the use of digitalis is that too large a dose is prescribed at first, which tends to premature arterial contraction and cumulative effects. Then with the appearance of these physiological symptoms the use of the drug is stopped and that of some other medicine substituted until the pulse again calls for its administration. In this haphazard way of using digitalis the heart is never held in good control. In exceptional cases, where there is urgent need to push the drug, digitaline is best used subcutaneously. In ordinary cases a dose of ten minims of the tincture every four hours, or fifteen minims every eight hours, or five minims every waking hour is sufficient. Thus given, the patient being at rest, it generally takes about three days before the pulse is under control and the urine begins to increase. When its decided effects are thus gradually developed the use of the drug should be steadily continued in doses calculated to maintain its effect. With ordinary watchfulness there is no risk whatever; timely warning of excess is given by the pulse, which having become slow, begins to exhibit small intermediate beats and especially a tendency to go in couples. This is always a sign to reduce the doses or to omit them for a few hours. The sickness that occasionally supervenes with digitalis is most troublesome. An occasional mercurial will sometimes prevent it, a change to digitaline in equivalent doses may be tried, or a tumbler of very hot water may be taken occasionally. In some cases it is not to be overcome except by omitting the use of the drug; the patient is well under the influence of the drug before this symptom, in which case a small dose of digitaline by the mouth or hyperdermically may be sufficient to maintain its effects on the heart.

Annual Announcement of the Medical College of the State of South Carolina, and College of Pharmacy.

The Seventieth Course of Lectures will commence on Saturday, the 1st of October, 1898, and end March 31st, 1899.

This Institution, founded in 1828, is sufficiently known throughout our Southern and Western country as a school established upon a solid foundation. The record of its original founders, and those who immediately succeeded them, is blended with the history of Southern medicine. The names of Holbrook, Moultrie, Dickson, Prioleau, Frost, Ravenel, Wagner, Geddings, Shepard, Bellinger and Gaillard are ever to be revered. The Alumni of the School have been scattered far and wide, more particularly through the South and West. Some have been deemed worthy to fill the highest positions as teachers in popular and influential schools, and have added new lustre to their Alma Mater. The Colleges of New York, Baltimore, New Orleans and St. Louis may be instanced as having profited by their talents and attainments.

What is Sunstroke?

What is sunstroke? This question, so important to residents in hot climates, is dealt with in a new way by Dr. Sambon, a distinguished Italian physician. Dr. Sambon's view was that this illness is not heat fever, but an infectious disease. During the past year he has pursued his investigations into this matter in all directions, and recently, in the "British Medical Journal," he contends that siriasis, which is the oldest name for thermic fever, is caused by a specific germ, and he has brought forward a remarkable body of evidence of all kinds to show this. Dr Sambon's conclusion concerning the mode of infection is as follows:—"The specific organism of siriasis is probably spread in the superficial layers of the soil, like other pathogenic microorganisms, and may be conveyed to a man with dust blown by the wind or thrown up under the tread of a marching column. It is then inhaled into the lungs or ingested into the alimentary canal, where it produces the virulent toxine, which probably, as in cholera, becomes absorbed and sets up the symptoms of the disease.

Relation Between Diabetes Mellitus and Diabetes Insipidus.

Experiments on animals have shown that there is a close relation between polyuria and polyuria with glycosuria (Senator, Edinburgh Medical Journal). Clinically, also, there is a close relation between certain cases of diabetes mellitus and diabetes insipidus. With regard to the etiology, it is well known that both forms of diabetes are often connected with altered conditions of the nervous system. In the etiology of diabetes insipidus affections of the nervous system play by far the most important part. Of course the disease is not always due to gross pathological changes in the nervous system but frequently only to functional disturbances, neuroses, psychoses, and neuropathic conditions, acquired or hereditary. The same is true also of diabetes mellitus. Frequently, in the same family, besides diabetes mellitus or diabetes insipidus, epilepsy, psychoses, hysteria, and other diseases occur. Another point indicating the relation between the two diseases is the occasional occurrence of diabetes mellitus and diabetes insipidus in near blood relations. The author records a case of diabetes insipidus in which the mother had died of diabetes mellitus. But the best proof of the relationship of the two diseases is the transition of one disease into the other, or the alternating appearance of the diseases in the same patient. The transition of diabetes mellitus into diabetes insipidus is the more common. This is a favourable change, since sometimes complete recovery occurs. First the sugar disappears from the urine, and then, in course of time, the quantity of urine becomes normal.

The author records two cases illustrating the transition of diabetes mellitus into diabetes insipidus and refers to a number of others reported in medical literature. He also records two cases of diabetes mellitus in which the sugar disappeared and was replaced by albumen; then the albuminuria disappeared and polyuria remained. Finally the patients recovered completely. Notes of another case are given in which symptoms of diabetes insipidus were present; finally, glycosuria occurred, and the patient became wasted and died.

The occasional alternating occurrence of diabetes mellitus and diabetes insipidus is mentioned by Westphall.

Fatal Acute Alcoholism in a Child.

Weber (Edinburgh Medical Journal). An apparently healthy girl, five years old, unaccustomed to alcohol, took on an empty stomach a small amount of undiluted whisky. She soon became insensible, and artificial respiration was at one time resorted to for the maintenance of life. After about nine hours a second stage was entered on, characterized by violent tetanic convulsions. As the convulsive tendency diminished, a third stage could be distinguished, marked by dyspnœa, cyanosis, and an increasing temperature. The child never regained consciousness, and died about fifty-six hours after the whisky was taken, in a similar way to that in which persons in a "status epilepticus," or children with a series of infantile convulsions, sometimes die.

Although absinthe is in France well known to produce epileptiform convulsions in some persone, when an overdose is taken and always does so when injected into animals, a similar spasm-producing quality has not been assigned to whisky. There was no reason, however, to suspect the truth of the parents' evidence, although the father may have under-estimated the amount of alcohol taken. Moreover, children are, of course, more liable to convulsions from any cause than adults, and the whisky taken on an empty stomach may have been rapidly absorbed, and have produced such an impression on the cortical grey matter of the child's brain that a "status" of convulsions was produced.

On the whole, the most probable explanation of the case seems to be that the whisky

(the exact amount taken must be left uncertain) induced insensibility and a "status" of convulsions. This terminated fatally as any "status" of convulsions in children, and the "status epilepticus" of ordinary epilepsy sometimes do.

Responsibility of Medical Men.

"Dr. Brouardel, the distinguished doyen of the Paris faculty, discusses, in the "Revue des Deux Mondes," the important question of medical responsibility. In spite of the numerous references in satirical writers to the 'license to kill' supposed to be enjoyed by every son of Æsculapius, Dr. Brouardel has no difficulty in showing that the idea of medical responsibility is practically contemporaneous with civilisation. Of course attemps have been made to get rid of the doctrine, in the interest of incompetent practitioners. For example, in 1896 the Parliament of Paris declared that the responsibility for the effects of medical treatment rested with the sick person who chose the doctor, but some years later the same Parliament condemned certain therapeutic methods, notably the transfusion of blood. They even issued a decree against the use of emetics; but this they had to rescind, for it was Louis XIV.'s favourite remedy for his frequent attacks of indigestion. In 1760 the Parliament of Bordeaux gave the enormous damages of 15,000 livres for a broken limbs which had been badly attended to and had to be amputated. In England, in 1886, a doctor was acquitted, although he had given a purgative to a patient suffering from heart disease, who had died in consequence. Not to multiply instances, it is clear that legislators have failed to establish a firm basis of medical responsibility, and consequently the application of it has greatly varied according to the existing trend of public opinion.

Virulence and Non-Virulence.

In the very interesting Croonian lectures now being delivered by Professor Sidney Martin before the Royal College of Physicians on the chemical products of pathogenic bacteria, an important point arises in regard to the difference in the products of the typhoid organism in its different conditions as to virulence (The Hospital, July 2d, 1898). The matter of varying virulence is indeed one of the most important matters in that branch of pathology which deals with the microbic origin of infective diseases, for on the influences which determine virulence or non-virulence no doubt depends much which is at present dark as to the etiology of these diseases, their occasional latency, and their spread in an epidemic form. Professor Martin says that none of the ordinary cultures of the typhoid bacillus obtainable in laboratories will kill an animal. He obtained cultures from various laboratories in England, and found them all incapable of causing death. He then describes the methods adopted for obtaining the virulent microbe, and goes on to say that the virulence even of the bacillus as obtained direct from the spleen after death or during the course of the disease varies somewhat. Another matter of interest is that after injection of the sterile poison derived from the spleen—i. e., the chemical poison free from microbes—there was a very distinct period of incubation, during which no effect on the body temperature or the weight was to be observed, and that not till the fifth day after injection did symptoms arise—a course very different from what we are given to associate with the action of a poison.

Prolonged Diphtheria.

The British Medical Journal, No. 1934, publishes a description of a case of diphtheria that lasted 362 days. The case was that of Dr. Golay. The illness began on March 11th, 1896, and after an injection of antitoxin the membrane had almost vanished on the 16th, and the child seemed quite well. Up till August 6th virulent cultures of the bacillus were obtained (25 examinations), at first in pure cultures, afterwards along with streptococci. From then till September 2d cocci predominated, but a few short bacilli proved experimentally to be diphtheritic, were present also. On September 1st there was an acute relapse, with patches on the tonsils and B. diphtheriæ in pure culture. By September 4th, after an injectien of serum (the third) the child was again cured clinically. On September 10th no bacilli were found microscopically, and the cure was thought to be complete (just six months from the beginning), and no more cultures were made. However, on October 22d there was another acute relapse, and the short bacillus was present with streptococci. By October 28th nothing could be discovered under the microscope, and the patient, a boy aged five and a half years, was again looked upon as cured, and no further cultures were made till February 5th, 1897, when there was a third acute relapse when short bacilli and streptococci were found. These persisted after a fourth injection of serum till March 9th. From then till September, 1897, the child kept well, but, as the parents would not consent to any more bacteriological ex-

aminations it is doubtful if he were finally cured even then. Dr. Golay thinks there can be no doubt but that bacilli were never really absent. He concludes from this and other cases that (1) a fortnight's isolation after the disappearance of the false membrane, as advised in classical works, is totally inaduquate; not till three or four examinations at intervals of a week have proved the complete absence of bacilli can cure be considered permanent; (2) the presence of Loeffler's bacillus between the attacks of angina does not alter the general health; (3) the prolonged presence of diphtheria bacilli after the disappearance of membrane is the rule rather than the exception, but probably this period is not so prolonged when there is an associated streptococcus infection; (4) local treatment should be abandoned entirely, as its only use is to torture the patient. In the case given above a good number of the local applications recently recommended (by Loeffler and others) were tried thoroughly without the slightest effect.

Oil of Eucalyptus in Headache.

Hare, in the Therapeutic Gazette, calls attention to this remedy for obstinate headache. He says:

As long ago as 1889 Lewis and de Schweinitz reported no less than eight cases of violent headache, which had resisted other forms of treatment, which were benefited by the use of the oil of eucalyptus. In the first of these, violent occipital headache with zigzag lines and prodromal hallucinations was entirely unaffected by the administration of full doses of quinine, although there was a marked malarial history. Further than this, correction of errors of refraction did not give relief, but the exhibition of five minims of the oil of eucalyptus five times a day caused a complete cure. In another instance in which there was neither malarial nor rheumatic history, but a severe occipital headache of the congestive type, similar doses of oil of eucalyptus gave relief unless the headache was distinctly dyspeptic. In still another instance a patient suffering from occipital headache of the congestive type, and in whose case cannabis indica and antipyrin were utterly useless, not only was relieved of the individual attacks, but was able to prevent subsequent ones by a few doses of the drug. Perhaps the most interesting case that they report is that of a woman of thirty-three years, with a gouty family history, who had been for some time a great sufferer from hay-fever and who had also suffered from violent headaches of the congestive type, the pain being of a jumping character and spreading over the head, there being associated intense injection of conjunctiva and swelling of the face. In this case, also, the ordinary headache remedies failed, but the oil of eucalyptus given in doses of five minims every four hours gave great relief during the paroxysm, but was most efficient when exhibited during the prodromal period, Since these studies which we have quoted other investigators have employed the oil of eucalyptus in a considerable number of cases with advantage, and while it is not a remedy which is suited to every case, nor agreeable to take, and while in a certain proportion of cases it may produce disorder of the stomach, it is at least to be remembered when the physician is called upon to treat obstinate forms of head pain not dependent upon morbid growths.

Cirrhosis of the Liver in Children and Young Adults.

Dr. Hugh R. Smith (Clinical Society of London, May 27, 1898) read a paper describing seven cases. The clinical history and *post mortem* appearance of each case were given in some detail. (British Medical Journal.)

The ages of the patients varied from 9 to 24 years at time of death. The cases fell into two distinct groups, corresponding fairly accurately with the so-called atrophic and hypertrophic cirrhosis of adults. Thus in the first four there were ascites, absence of jaundice, and hobnailed livers, which showed microscopically a well-marked multilobular arrangement of the new-formed connective tissue, and the course of the disease was short. Thus one case died eight days after the appearance of definite symptoms, and the most protracted only lived four and a half months. In the last three there was marked jaundice from the first, absence of ascites until the close of the disease, and a large liver, which showed a definite unilobular arrangement of connective tisssue and very numerous new bile canaliculi; these cases also showed a much more protracted history, living ten, four and five years after the first development of liver symptoms. In three of the atrophic variety death was due to acute purulent peritonitis for which, *post mortem*, no discoverable cause could be found. Two similar cases of apparently spontaneous purulent peritonitis occurring in adults suffering from alcoholic cirrhosis of the liver were mentioned, and it was suggested that in this disease there was an increased susceptibility of the peritoneum, so that acu-

inflammatory changes were readily set up. The difficulty of diagnosing the atrophic form of Juvenile cirrhosis was dwelt upon, and it was shown that the majority of these cases were put down to tuberculous peritonitis during life, owing to the association of considerable acute and irregular temperature, which latter symptom was so frequent a feature of the cirrhosis in childhood. The production of this temperature was obscure, since, post mortem, no existing cause could be discovered. It was pointed out that the same irregular temperature occasionally occurred in the alcoholic cirrhosis of adults without any discoverable cause being found post mortem. In one of the cases in which jaundice was associated with the cirrhosis, considerable stunting of growth and clubbing of the fingers were noticed exactly similar conditions had been described by Drs. Gilbert and Fournier in 1895, and by Dr. Frederick Taylor in 1897, in association with cirrhosis of the liver and jaundice, so that the connection was certainly not accidental, and seemed to be a definite symptom of the disease, which, however, appeared to have escaped notice until Drs. Gilbert and Fournier's paper in 1895. The etiology was then discussed. Although alcohol had been frequently shown to be the cause of cirrhosis even in young children, in the cases described, this factor could be pretty certainly excluded, as could also a syphilitic origin in all but one case. In one of the cases where the cirrhosis was associated with jaundice, the symptoms had started shortly after a severe attack of scarlet fever. The connection of this form of the disease with both scarlet fever and measles had so frequently been shown to exist, that one was hardly justified in supposing that the association was accidental, more especially as Dr. Klein had demonstrated that intestitial hepatitis might actually develop in the course of scarlet fever. The possible origin of cirrhosis from the absorption of toxins from the intestines due to chronic enteritis might be the explanation of the appearance of the disease in two of the cases recorded in which there was a history of chronic diarrhœa, in one instance for two months and in the other for a year before definite signs of liver disease showed themselves. In the majority of these cases, however, the etiology was altogether obscure.

Chloroform Anæsthesia.

Writing about the production of chloroform anæsthesia, Surgeon Lieutenant-Colonel Lawrie, of Hyderabad, (The Hospital, June 25, 1898), says: "In Hyderabad chloroform is given by students in strict accordance with Syme's principles, the heart is ignored, and we have no deaths. In England the teaching of anæsthetics is in the hands of professional anæsthetists, who 'funk' the heart, and deaths from chloroform take place, according to Leonard Hill, by the dozen, and, according to Roger Williams, no less than once in every 1,236 inhalations. The deaths under anæsthetics in England represent an appalling picture of the incapacity of the medical profession as regards the administration of these drugs. This incapacity is altogether due to the absolute want of training of English students in the art of chloroform administration on Syme's principles, which have been established on a scientific basis by the Hyderabad Commission." This is an old indictment and an old assumption, and we have very little doubt that both are wrong. Certainly the "professional anæsthetists" here spoken of with such scorn no more neglect the respiration than Colonel Lawrie does, and as to the inhalers used in this country, some of them leave quite as free an air way as a Hyderabad cone does. The question is, to a large extent, one of dose, and although we do not approve of the open or slap-dash method, we are to this extent in sympathy with Col. Lawrie, that we do not think that, if that is to be accepted as the proper way of administering chloroform, the method ought to be properly taught, and that the importance of plenty of air should be as much insisted on as that of plenty of chloroform. It is here, we fancy, that the young student often fails, and that the inexperienced practitioner gets into difficulties. The open method even with air is uncertain, but the open method without plenty of fresh air is absolutely dangerous. But then air and plenty of it was what Syme taught, and what is still taught, even in benighted England. Suffocative anæsthesia is the recourse of the inexperienced. Whether it would not be better still to teach that chloroform should be so administered that the dose given can be known and can be regulated, and by an apparatus which ensures that in proportion as the respiration is retarded or interfered with the chloroform may also be withheld, is another question. This will doubtless come in time, for even the advocates of the open method must sometime see that such an apparatus is really an "open" one, more open, perhaps, than a Hyderabad cone, and that by its means the chloroform can be adjusted precisely to the respirations. In the meantime there can be no doubt that Col. Lawrie is wrong in his estimate of English "professional

anæsthetists," as he probably is also in his ideas as to the relation between circulatory and respiratory failure, although as to this we speak with some reserve.

Advertising Quack Medicines by Religious Newspapers.

WASHINGTON, D. C., July 5, 1898.

Editors of Charlotte Medical Journal:

GENTLEMEN: As the vexed question of quack advertising in religious papers is always unsettled, I send herewith a copy of a letter written by me to a religious editor on the subject. His paper, to which I was a subscriber, contained a paragraph announcing some one would cure cancer without operation, caustics, or drugs, I think he added. I wrote as follows:—

——, Ga., ——, 1897.

Rev. ———, D. D., Editor ——— (one of the leading religious papers of the South).

Rev. and Dear Sir: In your paper of the — inst. appears an advertisement of ——, who claims to be able to cure cancer. Not only am I a physician, of several years standing, but I am a pathologist, that is I study the causes, courses, effects and actions of diseases on man and other animals. So far as a special study of the "malignant tumors" for the last two years has enabled me to say, there is known no species of treatment for these horrible maladies that is certain to effect a cure, but early and complete removal seems to be followed by the best results. I believe that I am sustained by the bulk of my profession in this statement.

Every physician of repute considers it his duty to give to the world any discovery he may make, freely and fully. No patent protected vaccine, anæsthesia or antisepsis. When Pasteur thought he had conquered rabies and Koch hoped he had saved the seventh of our race that die from tuberculosis, no secrecy concealed the means used till they could be perfected. Had these grand benefactors attempted to put a price on human lives they would have been execrated, with justice, for selfish fiendishness. This is the boast of the medical profession, and no surgical instrument bears the patent brand.

Now, my reverend and dear friend, your name and that of your paper stand high in men's esteem. Many people who are ignorant of the facts given above think that you would guard them from deception, and to one who sees the grave yawning before him for himself or some dear one, this statement, endorsed by its very position, as he thinks, by you and our great church, it seems as a gift from the Deity Himself. He answers it, and this results:

The statement must be false or true. If it be false, the patient loses his money and more. When he detects the fraud, he can not reach the man who defrauded him but his faith in the —— is shaken, not merely in its advertising columns, but in all of it, as he feels that it should not have led astray in any way those who looked to it. "*Falsus in uno, falsus in omnibus*," and skepticism is a growing condition. From the church paper it spreads to our church, from that to the faith on which our church is planted.

It may be true; I know of no cure but my knowledge is no criterion, and he may have discovered some cure. I have not the statistics at hand on which to base a percentage of the deaths from cancer, but it is very high. We will grant that he has discovered a cure for thee awful, painful and hopeless affections; is he not bound by every sentiment of humanity, of professional honor, even by personal ambition, to publish it abroad for the healing of the nations? Is it a proper stand for Christianity as represented by your paper to sustain such cruel avarice?

I hope you will remember these facts when he makes his next contract, and in the meantime think whether it is well for so upright and manly a sheet as I know the —— to be, to encourage deliberate fraud.

Hoping this will be taken in the same goodwill as that in which it is sent, and with much personal regard, I am

Yours Very Respectfully,

A few days afterward I received a reply saying that I made an entirely new presentation of the subject, and that Dr. X's advertisement would not appear thereafter.

Yours Truly, etc.

Quinin Instead of Ergot in Midwifery.

Mackness thinks that ergot is often administered in labor when better results might be obtained from the use of quinine. (Edinburgh Medical Journal.) All preparations of ergot are unreliable. The liquid preparations are nauseating, and ergotin keeps badly and is not suited for hypodermic use. Moreover, ergot causes tetanic contraction of the uterine muscles,and while tt sometimes produces spasms of uterine contraction there is not complete relaxation between the pains. This tetanic contraction is dangerous to the mother and even more so to the child, so that if delivery is not accomplished within half an hour after the administration of the drug, other means have to be resorted to.

The advantages of quinine are numerous. It keeps indefinitely and can be administered in tasteless form. It has no tendency to produce vomiting. Its action is certain and is manifest within twenty minutes after its administration. It increases the strength of the labor pains while relaxation occurs in the intervals just as in normal labor. This fact can be verified by any one who chooses to keep his hand upon the abdominal wall after the drug has been administered. It is therefore of special use in cases where inertia is caused by the general exhaustion of the patient or by actual lack of power in the uterine muscles themselves. If delay is caused by obstruction in the passages no drug, of course, can avail. In normally formed primiparæ where slow dilatation of the passages causes exhaustion of the uterine muscles, quinine will often stimulate them anew so that delivery can be accomplished without instrumental interferance. Two four-grain pills of the sulphate are given and if the pains do not increase sufficiently another is given in an hour, and yet another an hour later. The third dose is, however, rarly required. Toxic symptoms need not be feared. Ergot should be administered after labor to control hemorrhage. It is useful in threatened abortion where hemorrhage occurs without pains, the os uteri being closed. Given in small doses it is benefical in subinvolution of the uterus.

Influence of Age, Sex and Race in Surgical Affections.

W. L. Rodman (American Medical Association, June 9th, 1898,) said:

The susceptibility of the negro to disease three hundred years ago still exists, especially to local tuberculosis of the glands, skin, and bones. The negro is still obnoxious to fibroids, neoplasms, keloids, tetanus, etc., but it is believed by many that the African will at some time become as extinct in this country as has the buffalo. Cancer was rare in this race up to fifty years ago, but malignant disease has increased among them of late much more than among the whites. Cancer of the uterus is very frequent in negroes. The most common tumors of childhood are sarcomata although the earliest case on record is that of a cylindroma occuring in a child aged eleven weeks. Tuberculosis is fast becoming the deadliest foe to the negro race and is twice as common as in the white, while the Indians frequently develop this disease upon giving up their outdoor life to attend school. Gallstones and chololithiasis are rare conditions before the age of thirty, but grows more common in advancing years, and are more frequent in women than in men, an explanation for which is the wearing of corsets and their sedentary habits. Several times more prominent in men than in women is aneurism, due to the greater tendency of the former to arterial degeneration. Speaking geographically, aneurism is frequent in England, but rare in China, which freedom is due to the rice diet and habits of the people.

Pathology of Eclampsia.

A study of 500 cases Dr. Prutz (Deutsche Med. Woch.) shows that hæmorrhage is the distinguished features of the changes found in the various organs, and that among the complications broncho-pneumonia and cerebral hæmorrhage are the principal causes of death. Bacteriological investigations results negatively except in mixed infection. Chemical investigation of the blood and of the toxicity of the urine and serum is still in the preliminary stages, and the present knowledge of eclampsia does not justify sweeping conclusions in regard to its etiology. In 368 cases only 7 had sound kidneys; there was nephritis in 46 per cent.; chronic inflammatory processes in 11.6 per cent. Changes in the liver, mostly hæmorrhagic, were noted in 213 cases. Hæmorrhage into the brain was noted in 28.4 per cent.; intracranial hæmorrhage in 35.3 per cent. The stomach, intestines, spleen, pancreas, suprarenals, and genitalia are also frequently found to have been the seat of hæmorrhage, and even the skin, mucous membrane, muscles, serous surfaces, and thyroid gland.

The Power of the Urinary Bladder to Absorb.

Morro and Gaeblin arrives at the following conclusions (Edinburgh Medical Journal): The urinary bladder is capable of absorbing an appreciable quantity of medicinal substance in solution. The greater the concentration of the agent, the more the absorption. Water is excreted into the bladder in relative proportion to the amount of material absorbed by it. At the same time a small quantity of sodium chloride passes into the bladder from the blood.

Of all substances used—grape sugar; urea, sodium chloride, alcohol, boric acid, cocaine, quinine, carbolic acid, and morphine—the latter was the only one not absorbed. Carbolic acid was absorbed. Practically, cocaine must be introduced into the bladder with great care, and carbolic acid should never be brought in contact with its mucous membrane in any considerable quantity.

Proper Surgical Treatment of Tuberculous Bone Disease.

The summary of an article upon this subject by Horace Tracy Cabot is as follows: (American Journal of Obstetrics.) 1. Many observations prove that tuberculous diseases of the bones and joints is caused by the tubercle bacillus. 2. Injuries of moderate severity favor the production of the disease. 3. In the bones the disease begins in the epiphysis, and is more extensive than appears on gross examination. Hence, in operations for removal of the disease a considerable margin of apparently healthy bone must be removed. 4. Tuberculosis of the joints is generally, if not always, secondary to tuberculous diseases in the epiphysis of an adjacent bone. 5. Abscess formation is due to extension of the tubercular process to the soft parts. The contents of the wall of the tubercular abscess are different from those of infectious abscesses. Partial removal of the abscess wall is harmful. 6. Repair is caused by the formation of fibrous tissue, which replaces and partly encapsulates the tubercular tissue. Repair may be incomplete. Fibrous tissue may produce fibrous ankylosis, or the tissue may become ossified and lead to bony ankylosis. 7. Paralegia in Pott's disease is rarely due to direct bony pressure. Usually the pressure is caused by tubercular peripachymeningitis. Rarely the pressure causes degeneration of the cord.

Nervous Dyspepsia.

Dr. Rosenheim, of Berlin, at the recent International Medical Congress, defined nervous dyspepsia as a sensory neurosis differing from hyperæsthesia in that the disturbances are intimately associated with digestive activity of the stomach and that symptoms are very similar to those of different forms of gastritis. In nervous dyspepsia both motory and sensory functions may be disturbed. There may be an acidity, subacidity, or hyperacidity. Diminution in the amount of the gastric juice, hypermotility and atony are often found. If the functional disturbance is marked and continues a long time, nervous dyspepsia may be easily confounded with other affections, especially with one or other of the forms of gastritis. Nervous dyspepsia, thus defined, is not the frequent affection it is commonly supposed to be, and not all dyspepsia symptoms in a nervous individual point to nervous dyspepsia. In fifty such cases, *post-mortem* examination revealed the fact that more than one-half of the patients had suffered from other diseases of the stomach, principally inflammatory processes, and only in eleven cases were the complex symptoms of nervous dyspepsia found.

Nervous dyspepsia usually brings with it other nervous symptoms, sometimes giving us a complete picture of neurasthenia or (more seldom) of hysteria. That nervous dyspepsia is always a sympton of neurasthenia has been maintained, and it often happens that nervous symptoms depend on stomach disturbances and disappears when the latter are cured. Nevertheless, in nervous dyspepsia the treatment of the stomach symptoms are very uesful, especially when combined with the treatment of the general condition and the pathogenesis.

Stastistical Evidence in Favor of Excision of Chancre as a Means of Preventing Syphilis or Lessening its Severity.

Patterson in a recent issue of the Therapeutic Gazette, finds, from a statistical study, that out of 1274 cases of excision 925 were followed by secondaries; in 328 cases no secondaries resulted; in 21 cases the result was not ascertained.

These statistics show that excision does not abort the disease in every case, but clinical notes on many of the above cases prove that it does markedly lessen the severity of the secondary symptoms; in fact, in many of them the only subsequent symptoms were those of general adenopathy and slight cutaneous eruption.

In conclusion he said:

1. That syphilis is a bacterial disease.
2. That the chancre occurs at a point of infection.
3. The induration of the chancre is the attempt of nature to limit the disease.
4. That the chancre is an infecting wound, and a man has syphilis because he has a chancre, not that a chancre because he has syphilis.
5. That the chancre should be treated as any other area of local infection —i. e., by its removal.

Etiology of Chorea.

From statistics it would appear that the disease occurs in those of neurotic heredity, who have recently suffered from infection of some kind. This infection is, in the majority of cases, rheumatism, but there are many instance of chorea arising from other conditions, more particularly various specific diseases, such as measles (with or without broncho-pneumonia,) scarlet fever, typhoid, influenza, bronchitis, tuberculosis, and varicella. Even boils with marked glandular enlargement, impetiginous eruptions on the head, and suppurative otitis seem to be capable of producing chorea.

The Salicylates in Gout.

Dr. Arthur P. Luff, (Lancet) thus sums up the results of his observations on the use of the salicylates:

The supposed solvent effects of sodium salicylate for gouty deposits does not therefore exist. What I believed to be the correct explanation of the increased elimination of uric acid in the urine during the administration of sodium salicylate is that salicylic acid unites readily with glycocine and so conveys an increased amount of that body to the kidneys, where by its combination with urea an increased amount of uric acid is necessarily formed. This increased formation of uric acid is directly detrimental to gouty subjects, and on that account I consider that salicylates are contraindicated in gout.

1. The ordinary alkalies, the lithium salts, piperazine, and lysidine, do not exercise any special solvent effect on sodium biurate, and their administration to gouty subjects with the object of removing uratic deposits in the joints and tissues appears to be useless.

2. Sodium salicylate does not exercise any special solvent effect on sodium biurate. Its administration with the object of removing uratic deposits in the joints and tissues appears to be useless, and, moreover, it is appearently contraindicated in gout on account of its leading to an increased formation of uric acid in the kidneys.

The Action of the Alkaloids of Opium Upon Peristaltic Motion.

Vamossy (Rev. de Ther.) describes in detail the method which he employed in arriving at the following conclusions in regard to the question: What is the cause which gives to the opium a greater inhibitory action on the peristaltic motion of the intestines than morphine?

1. Morphine injected into the venous circulation has the power by its centric action to hinder the action transmitted by the pneumogastric to the centers, that its centripetal action is not transmitted by the centrifugal route to the intestine and does not provoke contractions.

2. Local injections of morphine into the intestines showed that the excitability and conductivity of the nervous system of the intestine undergoes a considerable diminution as the result of the local irritation.

3. The excitations which pass by the centrifugal motor channels to reach the intestinal wall encountered the terminal nerve fibers and ganglions in a state of narcosis.

4. Narcotine acts but slightly as an inhibitor of reflex excitability in the intestinal wall, and possesses no inhibitory action upon peristalsis.

5. Papaverine resembles morphine more closely in its action upon peristalsis, but its action is too unstable.

6. Thebaine augments intestinal excitability and provokes in consequence an intense peristalsis.

7. It can be no longer held that narceine acts in opium as an augmenter of inhibition to peristalsis in a manner similar to morphine.

8. Codeine exaggerates the intestinal excitability.

9. Cryptopinine and laudanine also acts as augmenters of intestinal excitability.

As the result of his study the author concludes that opium does not owe its favorable influence upon the intestine to the presence of the accessory alkaloids which it contains.

Precautions Against Malaria.

Mr. William T. Hornaday says: (N. Y. Medical Record.)

"After living in the most malarious jungles on earth, in the midst of miasmatic swamps, drinking swamp water, and often having to eat unaccustomed and badly cooked food, I never had but one touch of jungle fever, and that only laid me up for six or seven days. I owe my excellent health to two or three precautions. I never slept on the bare ground or in the rain, and always under shelter. I always wore light flannels next to the skin, and never slept in damp cloths, Whatever else I might have to do without, two changes of flannel underwear besides that I had on were always at hand. Take from five to six grains of quinine every morning in a cup of hot coffee, if you have it; if not, then in hot water. Have your shoes to fit you, even if you must buy them yourself, though the United States is furnishing its troops with an excellent marching-shoe. With these precautions and a dose of some laxative once a week, there need be no more fear of fever in Cuba than there is in Missouri."

The Tuberculin Test for the Presence of Tuberculosis.

Dr. W. P. Northrup, in the Medical News, April 23d, 1898, draws some very interesting conclusions from this test. He says:

The present list comprises sixty-one cases.

Sixteen patients believed to be tuberculous all reacted to the test.

Nineteen patients believed *not* to be tuberculous all failed to react.

Sixteen patients clinically believed to be, but never proved, tuberculous, all reacted.

Fifty-one patients, eighty-four per cent. (the above,) behaved clinically as was expected.

Seven patients, clinically doubtful reacted.

Two patients, clinically suspected, failed to react.

One patient, subsequently proved tuberculous (autopsy "a few recent tubercles,") failed to react.

No harm to any patient from the test.

Local irritation (never suppuration) occurred in both tuberculous and non tuberculous patients at the site of injection; no significance.

Constitutional reaction has fairly characteristic temperature curve, with headache, local pain, malaise.

It is a personal conviction of the writer that with further study of dosage and methods of administration, the tuberculin test will prove to be a material aid in diagnosis of latent tuberculosis.

Cold Sponging versus Cold Bath.

Dr. H. A. Hare (Therapeutic Gazette) states that he has used cold sponging in his hospital practice and rarely the bath, with the most satisfactory results. His plan is as follows: 1 In early typhoid, with constipation or moderate diarrhœa, give a full dose of calomel in divided doses in order to stimulate the liver and antisepticize the bowel with bile. 2. Control the fever when it reaches 102 deg. F. by sponging. The patient being stripped and laid on a rubber sheet or blanket over a sheet, he is to be sponged with water adapted in temperature to his needs, and it is to be remembered that the rapid application of a low temperature is more refreshing than the prolonged application of a higher temperature (Baruch). The chief advantage of the cold sponge lies in the shock and reaction. This is better obtained by the use of ice sponging than by the bath. The patient's surface is always bright red in ice sponging, often blue in the bath, and that the fever is not the chief danger in the case renders the fact that as great a reduction from the sponge is not reached as from the bath of little importance, except in hyperpyrexia. Shattuck tells us that he has found no marked or constant difference in the antipyretic value of cold sponging at 60 deg. F. for twenty minutes, the cold pack at 60 deg. F. for sixty minutes, or the cold bath at 70 deg. F. for ten or fifteen minutes. Finally, if this does not bring the temperature down to 100.5 deg. or 101 deg. F. in twenty minutes, resort should be had to the tub. It is essential when the sponging is used that more water be applied to the back than to the trunk of the body for at the back the great muscles and thick skin retain the heat as a reservoir, and are not cooled if only the front of the body is sponged. Further, the posterior surfaces are the ones apt to be congested and sore, from the dorsal decubitus, and therefore need the stimulating effect of the bath, as do the kidneys and other deeply situated organs That this treatment is of value is shown by the marked redness of the skin, the improvement of the circulation and respiration, and the cleared mind. 3. It is advisable not only to use friction in a light form, but to use moderately active massage, with the same objects in view as when the rest cure is undertaken, for the proper treatment of typhoid is a modified rest cure. Dr. Hare believes that by this means bedsores, local congestions and effusions, œdematous swellings, peripheral nerve pains, and muscular feebleness will be largely decreased, and Popischl has shown that mechanical irritation of the skin is capable of increasing heat loss 95 per cent. 4. In nearly all cases give more nourishment than the average typhoid patient in the past has usually had. With the exception of broths and meats, almost any article easy of digestion should be allowed—as one or two or more lightly boiled eggs, cornstarch, arrow-root, etc. 5. Use stimulants in carefully graduated doses whenever the circulation needs them, particularly alcohol. Even the cold-bath enthusiasts give whisky to overcome the depression they often produce.

Arrest of Hemorrhage from Large Vessels by Suturing.

Lindner, according to the British Medical Journal, reports a case in which, during an attempt to close a fæcal fistula in the left groin, the common femoral artery and vein were both opened. The bleeding from the vein was arrested by resection of about three-quarters of an inch of the wounded vessel and by double ligature. The arterial wound, on the other hand, was closed by two rows of fine silk sutures. The patient, an old and feeble man, made a good recovery. The author remarks that, whilst occlusion by ligature of a large arterial trunk alone, or of the accompanying venous trunk alone, is not likely to be followed by gangrene of the distal parts, simultaneous ligature of both vessels is, in this respect, attended by much risk, which is more likely to occur after wounding of both common femoral vessels than after a similar injury either of the axillary vessels or of the large vessels of the neck. Experiments on ani-

mals and the successful results of cases recorded by Schede have proved that under modern conditions of practical surgery a wounded vein may be sutured effectually without any risk of phlebitis. The indications for suturing are much more urgent in the case of a wound of a large artery, for, however small the wound may be, the prospects of closing it by compression are not so favourable as in a case of even a large venous wound. The practice of suturing an arterial wound must be subject to certain restrictions, as experience has proved that it would not be safe to apply a suture to a transverse wound involving more than one-half of the circumference of the vessel. In such cases it would be advisable to resort to the practice advocated by Murphy of resect ing the injured portion of the artery and bringing the ends together, the proximal end being invaginated into the distal one, and fixing them by five sutures. In practising arterial suture Lindner would transfix all the coats of the vessel, and in selecting the material of his suture would prefer fine silk to catgut.

Albuminuria and Nephritis in Pregnancy.

Dr. Allbutt (Homeopathic Journal of Obstetrics and Gynecology) believes that the opinion that the renal complications of pregnancy are due merely to mechanical pressure is erroneous. In the first place, he claims that pressure by the enlarged uterus upon the renal veins is not readily produced; again, complete thrombosis of the renal veins is not followed by renal symptoms which are averted by collateral circulation.

Moreover, swelling of the legs and other signs of venous obstruction are more frequent as pregnancies increase in number whereas albuminuria and eclampsia are evils of the primipara.

Again, other large tumors, as fibroids, do not prodnce serious kidney disorders, though disturbances of micturition and even pressure of the ureters, followed by dilatation of these tubes, and even by pyelitis, may occur.

In pregnancy there is little evidence of serious pressure on the ureters, and dilatation of these tubes is rarely a complication. The puerperal kidney differs from the cardiac kidney, in that it is not as hard, is often pale, and presents signs of acute degenerative changes penetrating its tissue. It would seem that two poisons at least are concerned in the production, the one leading to convlsions, the other to coma. In some not infreqnent cases the two acting together produce convulsions, followed by coma. It is now generally conceded that there is a toxin as yet unseparated in healthy urine. It is not urea, uric acid, kreatinin, or potassium chloride. Thudicum thinks it lies in the coloring matters of the urine. Allbutt thinks it most probable that the toxin is absorbed from the bowel, for it is less in amount in a fasting animal, in hibernation, and in the urine after sleep. The point of formation of the toxin is also unknown, but it is probable that the liver is at fault, as is suggested by the frequency of liver disease in pregnant women. Saft believes that the condition is caused by an auto-intoxication by some product of tissue change, as is the origin of molimina gravidatis, and of the nervous disturbances of the pregnant state.

It is a matter of great importance that the pregnant woman should learn to procure for herself daily evacuations of the bowels, especially toward the end of pregnancy and beginning of labor. Mild-dietetic regimen will usually procure this; if it fails, mild aperients, as cascara, senna, or comp. licorice powder may be used.

It is of the very greatest importance during pregnancy and the puerperal state that the function of the kidneys be maintained, with a proper equilibrium between skin digestion, waste, and these organs. If any organ can bear a greater exercise of function it is the skin, and next in order of tolerance is the intestinal tract; the lungs are far more sensitive, and the kidneys most of all. If possible, no puerperal woman should be permitted to leave her bed until her urine is free from albumen.

Mynlieff insists that when a woman with chronic nephritis becomes pregnant the induction of abortion is indicated on account of the immediate peril of the patient (which increases as pregnancy advances), the certain continuance of the morbid process in the kidneys themselves, the great tendency of flooding and abortion, and the small prospect of the development of the fetus to term.

Consumption an Indoor Disease.

S. W. Abbott, in the Boston Med. and Surg. Jour., suggests that the conditions which may be considered as mainly accounting for the fact that consumption bears the characteristics of an indoor infection are;

1. Within the Body.—(*a*) A slow and indefinite period of incubation; (*b*) in the majority of cases it appears as a disease of the lungs; (*c*) selection of the youthful or early adult period of life (15 to 30 years); (*d*) it exists as a disease of certain other mammals as well as of man; (*e*) mode of

entrance into the body, by the lungs, the alimentary canal, and by inoculation through the skin.

2. Without the Body.—The infection leaves the body mainly in sputum coughed up from the lungs, but may occur in secretions or excretions from other diseased organs. The infectious sputum is mainly that of the lungs, and not that which is simply discharged from the mouth as saliva; nor does it actually exist in vomitus. The tuberculous sputum specially dangerous is dry, the sputum of enclosed air-spaces constituting a far greater danger than that which remains out of doors. Given a definite number of healthy persons and let them be divided equally as to an indoor and an outdoor life, and let an equal quantity of infectious material be distributed equally among the two groups, and it may be laid down almost as an axiom, that the indoor group will become infected in far greater numbers than the outdoor group. This is due to the density of aggregation and the limitation of the air-supply. The preservation of the vitality of infectious material is also secured by the protection afforded by enclosed areas.

In proof of the proposition which forms the title of the paper, the author offers proof by presentation of tables: 1. As to the evidence presented by observations upon the mortality in different occupations. 2. The proofs afforded by the records of mortality by sex and age-periods.

Hepatitis from Intestinal Autointoxication.

Rovighi (American Medico-Surgical Bulletin.) studied this subject in six cases suffering from severe intestinal disorders. Five of these patients died, having the symptoms of Laennec's cirrhosis. The other case improved under appropriate treatment.

By injecting indol, skatol, and phenol in rabbits and observing their action upon the liver and in general, he experimentally confirmed the clinical observations.

Acute poisoning with indol and skatol produces great dilatation of the portal vessels and the central veins; chronic poisoning, especially with indol, changes the cellular protoplasm, which appears more granular, with swelling or double nuclei and slight connective-tissue infiltration around the vessels, and in the intracellular spaces. In the epithelium of the renal canaliculi yellowish granulations appear; the spleen contains leucocytes, together with destroyed red blood-corpuscles.

In acute phenol-poisoning he observed marked congestion of the vessels of the liver; while in chronic poisoning slight alterations of the protoplasm of the hepatic cells, thickening of the walls of the perilobular veins, and slight infiltration of connective-tissue elements were noticed.

The experimental hepatic lesions observed are very similar to those existing in patients from intestinal disorders, especially fecal stasis. Moreover, urobilin is present in both instrnces. The lessons observed do not constitute a true interstitial hepatitis; but the alterations of the protoplasm of the hepatic cells, and the slight connective-tissue infiltration around the portal vessels and in the intercellular spaces, form the origin of Flanot's and Boix's monolobular and intralobular cirrhosis. According to the author thus may be explained the production of hepatic cirrhosis without the influence of alcohol, malaria, tuberculosis, or syphilis.

Contrbutions of Bacteriology to Therapeutics.

Park, in Pediatrics, in summarizing bacteriology to therapeutics says:

Tetanus antitoxin is very valuable as an immunizing agent against possible infection in cases of lacerated wounds or before serious operations in localities where tetanus is not infrequent. Its power in these cases is marvelous and certain. In acute cases developing within a week and running a course of forty-eight or seventy-two hours, as a treatment it is of very little value, but when the incubation is longer and the course more subacute benefit will follow its use. Along with the usual treatment it should be given in doses of twenty to fifty cubic centimetres twice daily, and beginning at the earliest possible moment.

Diphtheria.—The results of the antitoxin treatment are so well known that the writer's conclusions need not be repeated.

Diseases due to the Pneumococcus.—These are pneumonia, pleurisy, pericarditis, endocarditis, abscess, cerebro-spinal meningitis, etc. Dr. Park does not think that the serum is of any practical value in the treatment of developed pneumococcus infection; nor does he think that it ever will be. It, however, is harmless and there is no objection to its use.

Streptococcus Infection.—His conclusions are: The preparations of anti-streptococcic serum now on the market are either quite weak or entirely wanting in curative substances. We are justified in using serum only when it has been recently tested and shown to have some value in preventing infection in animals. The serum preserves its strength only for a short time.

Treatment of Malignant Tumors by the Mixed Streptococcic and Prodigiosus Tox-

ins.—Only very temporary improvement follows their use in carcinoma. In spindle-celled sarcoma the result of the treatment has been excellent, in round-celled, not so good, and in melanotic, the action is the least marked.

New Tuberculin.—The benefit from this in treatment has not yet been estimated, because the samples used have been found to be contamined. In some vials living and virulent bacilli of tuberculosis were found, which when injected into animals caused tuberculosis.

Hydrophobia.—The treatment for this disease is still *sub judice*, though it is claimed that the percentage of cases developing hydrophobia after bites from rabid animals is very much less in those treated than in those not. A few cases have, however, developed the disease while under the full influence of the serum.

Drainage for Hydrocephalus.

Several attempts have recently been made to influence the progress and alleviate the symptoms resulting from internal hydrocephalus. (The Hospital July 2, 1898.) In a case reported by Bruce and Stiles, of Edinburgh, the fourth ventricle was opened and drained for required hydrocephalus in a girl, aged thirteen, who had inherited syphilis. Headache, with retraction of the head and pain in the back, were associated with marked emaciation in spite of a ravenous appetite. Various eye symptoms, almost complete paralysis of the limbs, and paralytic distension of the bladder ensued. Pulse 102 to 120, temperature irregular, reaching 103 deg. F. There was no vomiting. Mr. Stiles removed a trephine circle, three-quarters of an inch in diameter, and exposed the membranes, on opening which about ten ounces of cerebro-spinal fluid escaped from the fourth ventricle. Great quantities of cerebro-spinal fluid continued to escape, and the general condition improved for some time, but the patient died three weeks later. Postmortem chronic basal syphilitic meningitis was found, as well as an abscess in the kidney.

G. A. Sutherland and Watson Cheyne report a case in which operation was preformed in a congenitally syphilitic child of six months with hydrocephalus. A catgut drain was passed through an opening on the left lower angle of the anterior fontanelle, through the brain into the lateral ventricle. Although very little fluid escaped a steady and marked diminution in the size of the skull took place. Three months later, however, the child died from basilar meningitis.

Surgical Treatment of Gall Stones, or Chole-lithiasis.

A. W. Mayo Robsen, in a lecture delivered at the Royal College of Surgeons of England in March, 1897, states that after medical treatment has been fairly and fully tried in cholelithiasis, and has failed, that surgical measures should be resorted to. While cholecystotomy is generally recognized as the operation to be aimed at in the treatment of affections of the gall-bladder or bile ducts, especially in cholelithiasis, it is often impossible to say what operation will have to be done until the abdomen is opened. (Boston Medical and Surgical Journal, June 2, 1898.)

The indications for operating would seem to be as follows: (1) in frequently recurring biliary colic without jaundice, with or without enlargement of the gall-bladder; (2) in enlargment of the gall-bladder without jaundice, even if unaccompanied with great pain; (3) in persistent jaundice ushered in by pain, and where recurring pains, with or without ague-like paroxysms, render it probable that the cause is gall-stones in the common duct; (4) in empyema of the gall-bladder; (5) in peritonitis, starting in the right hypochondrium; (6) in abscess around the gall-bladder or bile-ducts, whether in the liver, or under or over it; (7) in some cases where, although gall stones may have passed, adhesions remain and prove a source of pain and illness; (8) in fistula, mucus, muco-purulent or biliary; (9) in certain cases of chronic jaundice, with distended gall-bladder dependent on some obstruction in the common duct, although the suspicion of malignancy be entertained (in such cases the increased risk must be borne in mind, as malignant disease may be the cause of the obstruction, and operation in such cases is attended with greater danger than ordinary); (10) in phlegmonous cholecystitis and in gangrene, if the case be seen and recognized at a sufficiently early stage of the disease; (11) in gunshot injury or in stab wounds over the region of the gall-bladder; (12) in suspected rupture of the gall-bladder without external wound; (13) in some cases of chronic catarrh of gall-bladder or bile-ducts; (14) in suppurative cholangitis;

Of the operative measures undertaken for diagnosis, sounding and aspiration of the gall-bladder must be referred to. The so-called "sounding for gall-stones," either by means of a probe passed through a canula or by the fine needle of an aspirator, is both uncertain and dangerous, and may more safely be replaced by a small exploratory incision, which can be extended for

treatment if required. Aspiration of a distended gall-bladder through the unopened abdomen, though apparently a simple procedure, is not unattended with danger, death having followed in more than one instance. Murphy says it is fatal in 25 per cent. It is only in very exceptional cases that it can do any good. Here, again, it is infinitely better to empty the gall-bladder by the aspirator, and afterwards to explore the bile passages with the fingers. If, however, aspiration without exploration be decided upon, a small needle should be used and the cyst emptied as far as possible, in order that intra-cystic tension may not lead to extravasation through the needle puncture. Since in the majority of cases an operation for gall-stones is, in the first place, simply exploratory, the actual operation on the gall-bladder or bile ducts being only determined by the conditions found when the abdomen is opened, it may be well for us first to consider a simple abdominal section in the gall-bladder region.

Exercise in Heart Disease.

In dealing with this subject in the Lumleian Lectures Sir R. Douglas Powell speaks of exercise as having been reduced to a system in three grades—massage, resistance exercises and the graduated walking exercises of Oertel. (The Hospital, April 16, 1898.

Massage is useful as a means of helping in the convalescent stage of acute heart affections; of combating the tendency to stagnant circulation in those who, being bed-ridden or sofa-ridden from any other cause, tend on that account to impairment of heart nutrition and its consequences. In regard to acute heart disease, however, massage is not to be advised. These acute affections mostly occur in young persons whose hearts are not disposed to degeneration, and whose muscles recover with an energy that has to be restrained rather than encouraged. So long as there is any activity or softness about the valve lesion we must not excite the heart to increased action, and so long as there is any daily rise of temperature massage treatment should be discouraged. In regard to "resistance exercises," Sir R. Douglas Powell speaks with very great caution and he does not accept all the *dicta* of the Schott school. "It seems to me," he says, "that the carefully graduated and observed exercises of Schott and Oertel may be regarded as a counsel of perfection to be advised for those who can afford them as a preliminary to the return to that measure of active life of which their heart condition admits, and as a guide indicative of what that measure will be, and by what degrees of ordinary exercise it may be arrived at." Again, resistance exercises are especially adapted for the initial treatment of flabby, irritable, "stuffy" hearts, applying that term to cases of fatty infiltration and impaired metabolism in people of venous plethora. In chlorosis with dilated heart, after a week or two of complete rest, the Schott treatment is valuable, if combined with a dry, bracing climate, and a chalybeate. In commencing failure of heart in chronic valve lesions the treatment may also be employed with a more or less complete cessation from all other exercises, and similarly after such cases have been restored up to a certain point by digitalis. Cases of atheromatous changes in the coronary vessels, characterized by a certain degree of plethora, and by breathlessness attended by cardiac pain on arriving at a certain stage of walking exercise, may also be cautiously treated by the same method. On the other hand, there are cases in which this treatment should not be employed. All cases of acute endocarditis, while there is any trace of activity of lesion, are still more unsuitable for this treatment than for massage. Cases of advanced cardiovascular changes, of the nature of sclerosis, and particularly when associated with granular kidneys, are absolutely unsuited. In cases of introspective people with neurotic hearts the treatment is best avoided, while the numberless cases of imaginary weak hearts that would naturally flock to specified "cures" really require a diagnosis and a better occupation than that of indoor gymnastics. Neither in tachycardial cases, nor in exophthalmic goitre do the exercises appear to be successful. Oertel's treatment by graduated walking exercise, and a dry non-fatty, non-starchy diet, as fully described in Ziemssen's Cyclopædia, may be regarded as a sequel to the Schott treatment. One great advantage is that it is undertaken in the open air, for there is little doubt that the discomfort which sometimes ensues from massage and passive exercises is often to be attributed to want of the abundant air required for the increased oxidation produced.

The Treatment of Gonorrhœa in Women.

In view of the frequency of gonorrhœal affections of the genito-urinary tract, especially in married women, and their well known obstinacy to treatment, it may be of interest to give a review of some recent and instructive experiments made by Dr. Fuerst, of Berlin, (Therap. Monatsch, April, 1898) with a new remedy in gynecological

practice. The drug referred to is protargol, which has already been extensively tested by Neisser, Finger, Benario, Goldenberg and other well known authorities in gonorrhœa in the male. Fuerst has treated thirty-six cases of gonorrhœal infection in females with protargol, comprising fourteen cases of gonorrhœa of both the cervix and corpus uteri, eight of gonorrhœa of the cervix alone, five of urethrocystitis gonorrhœa, three each of vulvitis and Bartholonitis gonorrhœa two of endometritis gonorrhœa, and one of colpitis. He thinks the strong bactericidal property of protargol, its freedom from irritation, nonpercipitation by the secretions and consequent marked penetrating power, has rendered it easier to limit the seat of the primary infection, to destroy the gonococci without irritating the uterus or adnexa, and prevent extension of the process. In the treatment of uterine gonorrhœa he employed irritation of the uterus 0.5 per cent. protargol solution, gradually increased in strength to 2.5 per cent. followed by insertion into the cervix of a solution bougie of protargol, 5 to 10 per cent. after this has melted the vagina was irrigated with 10 per cent. protargol solution, and a 10 per cent protargol-glycerine tampon inserted. After the second week astringents were restored to, and at the end of the third week the gonorrhoeal process was usually completely cured.

The Value of Electricity in Functional Diseases of the Stomach.

Max Weiss summarizes his experience of the treatment of functional disorders of the stomach by electricity as follows (Treatment June 9, '98): In paretic conditions of the œsophagus and cardia (viz., rumination), galvano-faradization is of great value. One pole of a galvanic battery is connected with the opposite pole of the secondary coil of a Dubois-Raymond, the other (usually the anode) with a broad electrode placed over the sternum. The free pole of the secondary coil is connected with an electrode, which can either be introduced into the œsophagus or stomach by means of a sound, or placed over the inner margin of the sterno-mastoid. The sitting lasts five minutes if the electrode is used internally, ten if applied externally. Cases of gastralgia and of hysterical vomiting require external galvanization, with a large electrode applied over the dorsal vertebræ, and a smaller one over the epigastrium. Five milliamperes should be employed at first, and the strength of the current subsequently increased to twenty-five milliamperes. Obstinate gastralgia, due to the cicatrization of a gastric ulcer, often yields to a current of fifteen milliamperes. Motor insufficiency of the stomach, with dilatation, is best treated with internal faradization, which may be advantageously combined with massage. Internal electrical treatment is also of value in correcting secretory disorders of the stomach, excessive acidity usually requiring galvanization, and subacidity faradization. Enteralgias are considerably benefitted by systematic galvanization of the abdomen, with the cathode placed over the dorsal spine and the anode upon the epigastrium.

Pregnancy following Ventrofixation with Improvements in Technique.

A. Lapthorn Smith (American Gynecological Society, Boston, May 24, 1898,) comes to the following conclusions, based upon about 2500 cases:

1. That as far as curing retrodisplacements is concerned, whether retroflexion, retroversion, anteflexion with retroversion, and also prolapse of the uterus, ventrofixation with two buried silk stitches passing through peritoneum and fascia gives the most reliable results. Failures are unknown when the operation is performed in this way.

2. Ventrofixation should be reserved for cases in which abdominal section is necessary for other reasons, such as detaching of adhesions and the removal of the diseased tubes which caused the adhesions. When it is expected that pregnancy may follow, some other operation should be chosen. because

3. Although pregnancy only followed in 148 cases out of about 2500, still in 30 per cent. of these, or thirty-six, there was pain, miscarriage, or difficult labor, requiring obstetrical operations.

4. When suspensio uteri was performed —that is, the uterus attached to the peritoneum—only a few relapses occurred; but, on the other hand, the patients were free from pain during pregnancy and the labors were less tedious; neither did they require resort to serious obstetrical operations. The uterus should therefore be suspended rather than fixed to the abdominal wall in all cases in which any part of the ovary is allowed to remain.

5. A third method, it is claimed by some namely—the intra-abdominal shortening of the round ligaments—is preferable to either ventrofixation or suspensio uteri. This may be done either by drawing a loop of the round ligament into the loop which ties off the ovary and tube, or, in cases in which the latter are not removed, simply to detach

them from adhesions and shorten the round ligament by drawing up a loop of it and stitching it to itself for a space of about two inches. By this means the round ligament develops as pregnancy advances, and the dragging and pain, and other more serious accidents which are present in 30 per cent. of the cases of ventrofixation, are certainly avoided.

6. If the uterus is attached to the abdominal wall, the stitches should be kept on the anterior surface, but near the top of the fundus; the complications were more frequent when there was too much anteversion than was the case when the anterior surface of the fundus was attached to the abdominal wall.

7. As large a surface as possible should be made to adhere, by scarifying both the anterior surface of the fundus and the corresponding surface of the abdominal peritoneum, in which case one buried silk suture will be sufficient to keep the uterus in good position.

8. Several of my correspondents mentioned incidentally that they knew of many cases of pregnancy after Alexander's operation, and that in no case was the pregnancy or labor unfavorably influenced by it. Alexander's operation should, therefore, be preferred whenever the uterus and appendages are free from adhesions.

9. The results of Alexander's operation are so good that even when there are adhesions it might be well to adopt the procedure of freeing the adhesions by a very small median incision and then shortening the round ligaments by Alexander's method; after which the abdomen should be closed. This could be done without adding more than one-half of 1 per cent. to the mortality, which in Alexander's operation is *nil*.

Silver Wire as a Suture in Surgery.

Dr. Crede, in an address delivered before the National Surgical Society of Germany, discussed silver and its salts, the citrate the lactate, which he termed the itrol and actol, and pronounced them the most powerful of all the surgical antiseptic yet discovered. It appears that his interest in silver as an antiseptic grew out of the observations of his farther, the elder Crede, on the value of the nitrate of silver in the treatment of inflammatory affections of the eyelids of infants. Nitrate of silver was not a success as a surgical dressing, however, on account of its chemical instability and its corrosive action on mucous membranes. While visiting the John Hopkins Hospital, in Baltimore, Dr. Crede was impressed with the use of silver foil as employed by Dr. Halsted, in affording an antiseptic covering for small or closed wounds. His next experiment, therefore, was made with metallic silver, using it as an antiseptic dressing for wounds. When applied to a sterile wound, he found that it remained unchanged, was non-irritating, and formed a thoroughly aseptic dressing. On the other hand, when applied to an infected wound, the products of bacterial life oxidized the surface of the silver, and, entering into combination with the argentic oxide, formed argentic albuminates, which had powerful antiseptic properties. Careful analysis developed the fact that it was lactic acid which was developed in the microbic secretions, and that when this combined with the silver oxide there was developed a lactate of silver, and in this resided the antiseptic properties.

In this discovery lies the explanation of the value of silver wire as a suture. In aseptic, sterile wounds it is non-irritating and remains unchanged. In infected wounds is supplies in itself the base of a powerful antiseptic, combining with lactic acid, and forming thus in the tissues the lactate of silver.

Painful Menstruation---Causes and Treatment.

In reviewing the subject, Lawrence (Int. Journal of Surgery,) presents the following conclusions:

1. Painful menstruation is not a disease, but merely a symptom found in various pelvic diseases.

2. Those classifications which place it as a disease are misleading and should be discarded.

3. The physiology of menstruation, a thorough knowledge of pelvic pathology, and a broad, careful habit of study and thorough ease-taking, are necessary in order that menstrual pain be rightly construed.

4. Many of the cases due to the uterus, tubes, or ovaries, may be cured in the early stages by simple means, whereas neglect places them in a position demanding serious operative treatment.

5. Painful menstruation in a sterile patient is strong evidence that there is tubal inflammation with occlusion of tubes.

6. Operative produces should be reserved for those cases in which there is a positive pathological indication; neurotic and anemic cases being treated by other and more appropriate measures.

7. As a symptom, menstrual pain is often of such grave import that it should always receive the most painstaking study. If this be the rule, many a case will be cured without operation.

Holocaine.

In a paper read before the Belgian Otological Society last summer, Coosemans records a series of experiments conducted in the physiological laboratory with a view to determining the mode of action and the bye-phenomena of this new local anæsthetic, and the work should be read in full by those likely to take more than a merely practical interest in the matter. The chief features of clinical importance are the following:—(Treatment, April 14, 1898.)

1. One per cent. solution of holocaine acts as a rapid local anæsthetic, equivalent in this respect to ten per cent. or twenty per cent. solutions of cocaine.

2. This solution causes no pricking sensation even when applied to the cornea; it has no intensely bitter a taste as cocaine, and gives rise to no unpleasant paræsthesia of the pharynx.

3. The anæsthetic is proved by experiment to be due to action on the nerve endings.

4. Local devotion of blood vessels is not prodcued, as in the case of cocaine.

5. General symptoms due to intoxication of nerve centres are similar to those produced by strychnia.

6. The relative toxicity for rabbits is as five to one of cocaine, and about the same as that of eucaine. On the other hand much more dilute solutions are used, and in surgical practice it is found that toxic symptoms are never noted, even in cases where cocaine has on previous occasions caused very great distress to the patient and concern to the surgeon.

7. One per cent. solutions are antiseptic, and undergo no decomposition when exposed for many weeks. They can, moreover be boiled without chemical change.

8. Holocaine is very much cheaper than cocaine or eucaine.

The Medical Society of New Jersey.

The one hundred and thirty-second annual meeting of this Society was held at Asbury Park, on June 28th, 29th and 30th, under the Presidency of Dr. David C. English, of New Brunswick. The following officers were elected for the ensuing year: President, Dr. C. R. P. Fisher, of Bound Brook; First Vice-President, Dr. Luther M. Halsey, of Williamstown; Second Vice-President, Dr. William Pierson, of Orange; Third Vice-President, Dr. John D. McGill, of Jersey Clty; Corresponding Secretary, Dr. William J. Chandler, of South Orange; Treasurer. Dr. Archibald Mercer, of Newark. The next meeting will be held at Deal Beach in June, 1899.

The Disinfection of Rooms.

Novy and Waite (Medical News,) conclude a paper upon the above subject with the following general directions:

1. All cracks or openings in the plaster or in the floor or about the door and windows should be caulked tight with cotton or with strips of cloth.

2. The linen, quilts, blankets, carpets, etc., should be stretched out on a line in order to expose as much surface to the disinfectant as possible. They should not be thrown into a heap. Books should be suspended by their covers so that the pages are all open and freely exposed.

3. The walls and floor of the room and the articles contained in it should be thoroughly sprayed with water. If masses of matter or sputum are dried down on the floor they should be soaked with water and loosened. No vessel of water should, however, be allowed to remain in the room.

4. One hundred and fifty centimetres (five ounces) of the commercial 40 per cent. solution of formalin for each 1000 cubic feet of space should be placed in the distilling apparatus and as rapidly distilled as possible. The key-hole and space about the door should then be packed with cotton or cloth.

5. The room thus treated should remain closed at least ten hours. If there is much leakage of gas into the surrounding rooms a second or third injection of formaldehyde at intervals of two or three hours should be made.

Normal Urine in Children.

Carron de la Carriere and Monflet in the Progrés Médical give the result of researches conducted on healthy children of eighteen months of age.

The healthy child urinates oftener than the adult. The specific gravity is higher; the acidity is stronger. By comparison, the child metabolizes more substance per kilo than the adult. The nitrogenous nutrition of the infantile cellule is on about the same scale as that of a man arrived at full development. The nitrogenous metabolism is more complete. With the adult only eighty-five per cent. of proteid. The child utilizes ninety per cent. of the total nitrogenous matter.

In mineral nutrition the variations are more marked, the infantile cellule being much more strongly mineralized. All the phenomena of nutrition are, in fact, incomparably more active than with the adult, the maximum being reached between five and ten years. The classical tables, dealing with the normal constitution of urine, are inapplicable to children.

American Association of Genito-Urinary Surgeons.

The American Association of Genito-Urinary Surgeons, held at Cranston's Hotel, West Point, June 7 and 8, 1898, elected the following officers for the ensuing year: President, Dr. James Bell, of Montreal; Vice-President, Dr. Samuel Alexander, of New York; Secretary and Treasurer, Dr. William K. Otis, of New York. The next meeting will be held at the Clifton House, Niagara Falls, in May, 1899.

Communication from Dr. Hays.

To the Editor Charlotte Medical Journal:

As every physician is forced to observe with pain and disgust the oft repeated charge of practising euthanasia which is constantly being hurled against the medical profession, it becomes interesting to observe that a recent writer in the "Humanitarian" takes an opposite ground, and charges the profession with cruelty and brutality in unnecessarily prolonging the life of moribund patients.

The writer is Percival Pickering, and to his article the "Literary Digest," June 25, has, in all seriousness, given a page of comment and extracts.

First, a case of cancer of the face is reported, in which life was supported for many weeks by artificial means after it became clear that death was inevitable. The writer is led from this and other cases to believe that through the efforts of physicians "dying is being made needlessly hideous and complicated."

That death, as in the case reported, is frequently a relief to both patient and loved ones we are ready to admit, but we deny the province of the physician under any circumstances to bring about such relief, and we reiterate a denial of the charges, made with dogged pertinacity by atrobilious members of the laity, that physicians do afford any such relief.

The province of the physician is to alleviate human suffering and to prolong human life. This has been instilled into him until it becomes a matter of instinct. It is a rule he never forgets, and from which he rarely swerves a hairs breadth. He is often ready to admit that death is desirable, but were he advised to hasten death he would need no better answer than the absurd argument of Mr. Pickering, who says "First, it should be criminal that the life of a dying person be shortened unless legal and incontestable proof be procurable that such an act is done by his individual wish. Secondly, it should be necessary that such a desire, attested by himself and corroborated by disinterested witnesses, be proved not to have been extorted from him by compulsion or intimidation. Special officials whose integrity was above suspicion might be appointed by government (like commissioners in lunacy) and the certificate of one or more of these should be necessary to prove the validity of the patient's desire for death, or even, it might be, to satisfy the scrupulous that the grounds for such a desire were medicinally justifiable. Further, and on this I lay particular stress, all publicity should be given to such cases of proposed self-destruction; it would be advisable that they should be previously announced in the papers, and it should be compulsory that they should only take place in a lethal chamber provided by government, and yet more, that such a chamber should be supplied with government attendants, to whom, even at the last moment, the patient could appeal if desirous to be removed thence. Such precautions would at once preclude the possibility of foul play and the danger of death-bed murders."

Did Hamlet ever dream of such a dream?

First, we must have lawful evidence that the patient wishes to die, that the wish is unquestionably voluntary; we must have an inspector who institutes a legal investigation, and having found the death of the patient legally justifiable, he must then procure a certificate from the family physician stating that the condition of his health demands it. But wait. The dying patient through the columns of the county newspaper must give thirty days notice of his approaching death, that those who may object may then speak, or thenceforth and forever afterwards refrain from mentioning the subject in his presence. The "lethal chamber"—a rather poetic expression for slaughter-house—must be under the supervision of governmental employees, whose appointments are under the civil service regulations. Later on we are told that exquisite music, delicious flowers and ambrosial perfumes should attend this necromantic dissolution. The exact form of death is not prescribed. Electrocution is at present held to be the most humane. De Quincy, in a lecture on "Murder, considered as one of the Fine Arts," discussed various forms of homicide, but reaches no definite conclusion as to which form is the most elegant.

It is well known that on our first day at sea we are in fear of death; on our second we fear that we shall not die. A "lethal chamber" on board each ocean steamer will at once put an end to this dire dread. Is it not a happy thought to the reader to imagine either his friends or himself suffering temporary derangement, or crazed with

pain imploring for death as a relief, whereupon he is at once placed in the hands of men who are paid by the State to ease him out of the world?

I have rarely attended a labor case where the woman did not express a wish to die rather than continue in her suffering.

Would not the ghost of each dead patient rise up and declare that his murderer had appeared, clothed in the mantel of Æsculapius,

"With juice of cursed hebenon in a vial,
And in the porches of mine ears did pour
The leperous distilment; whose effect
Holds such an enmity with blood of man,
That, swift as quicksilver, it courses through
The natural gates and alleys of the body:
And, with a sudden vigour it doth posset
And curd, like eager droppings into milk,
The thin and wholesome blood; so it did mine;
And a most instant tetter bark'd about,
Most lazar like, with vile and loathsome crust,
All my smooth body.
Thus was I, sleeping, by a brother's hand,
Of life, of crown, of queen at once despatch'd;
Cut off even in the blossoms of my sin,
Unhousel'd, disappointed, unanel'd;
No reckoning made, but sent to my account
With all my imperfections on my head;
O, horrible! O, horrible! most horrible!"

BENJ. K. HAYS, M. D.

Oxford, N. C.

Woman's Medical College of Baltimore.

The Woman's Medical College of Baltimore was incorporated in 1882, at a time when the education of women in medicine was not regarded with much favor by a large portion of the community, it has lived to see schools for the instruction of women in the science and art of medicine established in many parts of this country: what was at first a doubtful experiment when this college first opened its doors to women is so no longer, women have, in this country, at least, the same privileges as men. This was one of the first institutions in the country and the first in the state of Maryland to adopt a three years course, to call for a preliminary examination of entering students, to lengthen the annual courses and to adopt a graded curriculum. The faculty are always anxious and ready to adopt new and efficient methods for developing and strengthening their work and as they have in the past so it will be their effort in the future io keep well abreast of the times in which we live. The college is very centrally located in a high and healthy portion of the city and easily reached by all the car lines, across the street is the Hospital of the Good Samartian, owned and managed by the faculty. Both the Hospital and College buildings have just been thoroughly renovated and they are now admirably suited for their purpose, being on corners, they are well lit and ventilated. The central location of the college, the Hospital just across the street and the reasonableness with which board can be obtained have rendered the place very attractive.

The Faculty consists of Prof. B. B. Browne who holds the chair of Gynecology, Prof. E. F. Cordell, the chair of Practice of Medciine, Prof. J. G. Jay, that of Surgery, Prof. J. T. Smith that of Therapeutics, Prof. I. R. Trimble that of Anatomy, Prof. P. Kintzing of Chemistry, Prof. C. O'Donovan of Children, Prof. H. Harlan of Eye and Ear, Prof. Claribel Cone of Pathology, Prof. E. N. Brush, of the Sheppard Asylum, that of Psychiatry, Prof. C. H. Riley of Obstetrics, Prof. G. M. Linthicum of Physiology, Prof. G. C. Blades of Pharmacy, Profs. K. B. Batchelor, W. M. Lewis, Flora Pollack and Edith Eareckson are associated with the faculty and teach respectively, Clinical Medicine, Normal Histology and Clinical Microscopy, Embryology and Hygiene, Materia Medica, Neurology, Dermatology, Medical Jurisprudence and Bacteriology are also taught. Once each month the College Medical Society meets during the Session, all are welcome to these meetings and very much can be learned here, students are encouraged to read papers and report cases as part of their training. A bulletin is issued under the auspices of the society in which papers and reports of merit are published.

The Title of Doctor and the Practice of Medicine in France.

The Société Médicale de la Gironde recently passed a resolution that it is desirable that the university title of Doctor should not give the right to practice medicine, but that this righ should be conferred on doctors of medicine of French nationality who have not been convicted of any disgraceful offence by a professional jury consisting of a certain number of practitioners chosen outside the teaching body, and presided over by a professor of the Faculty. The examination by this body should bear on questions of practice, on medical legislation, and on professional ethics. This proposal has been favourably received by other medical bodies in France.

Dr. Gould persistently poses as the censor and critic of the Medical Press, and yet when a National Convention assembled he sullenly manifests the fact that speaking figuratively he belongs to the tribe of Indians known as "The Old Man Afraid of his horses."—*Medical Mirror.*

Results of Prolonged Insomnia.

The Boston Medical and Surgical Journal June 9, 1898, states that Preyer was the first to propound the toxic theory of sleep, according to which certain waste products during an active condition of body and mind are generated, which accumulate in the blood, cause the sensation of fatigue, and intoxicate the superior nervous centres to the point of inaction which is the equivalent of sleep." There is general recognition that this theory does not altogether explain that common and necessary phenomena of the animal kingdom—there must be other factors, still imperfectly understood.

There are very few observations on record concerning the results of prolonged insomnia, both as to the psychical troubles and palpable alterations of the central nervous system engendered. An Italian physiologist, Agostini, has noted two striking instances in the human subject where, as a result of long want of sleep, temporary psychical disturbances were observed.

The first patient was a railroad engineer, a robust man aged 45 years, of no hereditary or personal neuropathic antecedents, and not addicted to alcohol; who, by reason of the sickness of his fireman, had the sole charge of his engine for six successive days and nights. During the last night of his service, he left his engine at a station and proceeded to utter invectives against the people gathered there and to commit disorderly acts. He was taken to an asylum, where his condition was found to be one of mental confusion with excitement and hallucinations. After a sleep of fifteen hours without awaking he was completely restored, with no remembrance of what had taken place during the brief period of his delirium.

The next case was that of a young woman, who after passing nine days and nights by the bedside of her sick mistress, was taken all at once with psychical troubles on the morning of the tenth day. She imagined she had been the victim of gross outrages, did senseless things, muttered incoherent expressions, and passed suddenly from profound gloom to excessive gayety. After a long sleep she woke in a normal mental state, with but a confused and partial remembrance of what had passed. She resumed her place by the bed of her sick mistress, and after a night of watching, was again taken with an attack of mental confusion with delirium. She completely recovered after several days of complete repose.

Similar cases, in which the morbid symptoms were imputable to the insomnia alone, to the exclusion of every other cause of exhaustion, are reported by Hammond, Renandin, Meynert, Maury and others.

Agostini regards this kind of insanity as "acute mental confusion." He proposes to designate it as "transitory delirium of agrypnia" (the Greek word meaning insomnia), and would class it in the group of acute psychoses by exhaustion or intoxication. We have, in fact, to do with states delirium, which appear suddenly and are charaeterized by mental confusion, with hallucinations, incoherence of actions, varied emotional manifestations and consecutive amnesia. The condition is a sort of half-dream, of ephemeral duration and favorable prognosis, lasting from several hours to several days.

In order to study the histological alterations in the cerebra under the influence of prolonged deprivation of sleep, Agostini instituted some experiments on a couple of dogs which were placed under conditions in which sleep was impossible. One dog was confined in a suspended metallic cage furnished with bells which at each movement of the animal, made a low din in his ears. There was also a relay of attendants to watch the dog night and day to prevent him from lying down and sleeping, and to give him food and drink. This experiment was one of exquisite cruelty, and the same may be said of the succeeding experiment.

The first dog, a robust animal weighing eight kilogrammes, on the seventeenth day of the experiment fell into a state of extreme prostration, and became insensible to powerful excitations. Wishing to avoid all alterations of the nerve centres attributable to the preagonic period, Agostini trephined the cranium while the animal was still alive, and removed parts of the cerebrum by excision. Only when the membranes were incised were there observed certain manifestations of pain. To the naked eye the cerebrum and its membranes presented nothing abnormal. The histological examination, made after the method of Nissl, showed the presence of characteristic cell lesions. These alterations, which were found throughout the entire extent of the cortical substance, but especially in the frontal lobes, consisted in a disaggregation, in a fragmentation more or less fine, of the chromatic substance, beginning for the most part by the perinuclear zone and extending thence to the entire cell. Sometimes the cytoplasm presented the alterations characteristic of vacuolar atrophy. These lesions were, in the main, identical with those which Daddi had noted in his experiments on animals which were subjected to exces-

sive muscular fatigue as well as to prolonged insomnia; they also resembled the cell changes described in poisoning by arsenic, lead, alcohol, etc.

In the second dog, younger and less robust, which died of exhaustion on the twelfth day of the experimentation, the histological lesions of the cerebral cells were the same.

The similarity of the alterations found in these two dogs to those which have been observed in animals poisoned by divers toxic substances leads the Italian experimenter to conclude that the delirium of insomnia is due to an auto-intoxication of the cellular elements of the nerve centers, due to excessive disintegration of these centres. Generalizing still further, Agostini states the belief that the mental affections belonging to the group of psychoses, properly so called, such as mania, lypemania, and the divers kinds of mental confusion, considered heretofore as essential forms, *sine materia*, are often of antitoxic origin, that is, the result of lesions of the nerve cells produced by the action of poisons generated in the organism.

Intestinal Animal Parasites.

Peiper has called attention to the case of a girl, aged 10, who had symptoms absolutely indistinguishable from meningitis, but who recovered when some sixteen round worms were expelled after santonin. (British Medical Journal.) There are many such cases recorded in which alarming nervous symptoms have disappeared under similar conditions. By some these symptoms are looked upon as reflex in character. Another view is that the parasites may either contain a poison or produce one as a result of the metabolism caused by them. Round worms are not always so harmless as has been represented; in the West Indies they are looked upon as dangerous parasites. Attention has been drawn to a characteristic smell possessed by them, and a poisonous substance obtained from them has been known to set up an acute conjunctivitis with chemosis when accidentally applied to the eye. Living ascarides have been found by Arthur and Chanson to contain a poison which, when injected into rabbits, produced severe spmptoms, and even death. It cannot be definitely explained why toxic symptoms are not always present in these cases, but their appearance may depend on the duration of the disease and on the number and vitality of the worms. The ordinary tapeworms do not generally cause symptoms, but tænia nana has been known to do so. The bothriocephalus is supposed to cause at times an intense anæmia. In ankylostomiasis the marked anæmia may not always be produced by loss of blood, but by a protoplasm-destroying poison. Arslan has separated from the urine of two cases a toxin which produced anæmia in rabbits. The author refers to the symptoms which have been known to arise upon rupture of a hydatid cyst or upon puncture. In hydatid fluid there are undoubtedly toxic bodies. Probably toxic symptoms can be produced by the tricocephalus. Peiper refers to cases of oxyuris in which symptoms other than local have been noted. In trichinosis very intense symptoms have been set up shortly after eating infected meat before the parasites could have begun to migrate. Indeed, some of the early cases in an epidemic have been taken for cholera. It is probable that a toxin contained within the capsule, and liberated in the stomach, has produced the symptoms. Animals fed upon tape-worms have been known to die within twenty-four hours without other obvious cause. Tænia expansa can cause in lambs a fatal cachexia. The author concludes that it is exceedingly probable that these animal parasites contain or secrete a poison which is particularly damaging to nervous tissue, and also to the blood. It is, however, in only a few patients that these parasites cause the above-mentioned symptoms.

Tuberculosis of the Kidney.

J. H. Morgan (British Medical Journal). Speaking of the disease generally, Dickinson states that both kidneys are affected as often as one kidney alone, and only one case in seven occurs in which the disease does not affect other organs. Aldibert has collected twelve cases of children in whom nephrectomy was performed. Of these nine recovered and four died, two of the deaths not being tracable to the operation or to the original disease. No recurrence had taken place in one at the end of eight years, and none in another after three. Gross' tables give twenty instances of removal of the kidney at all ages for scrofulous disease; twelve patients recovered; eight, or forty per cent., died. Tubercle was limited to one kidney in only sixty-five per cent. In eight cases of preliminary nephrotomy relief was not afforded, so that this proceeding is not recommended. Morris, on the contrary, recommends that nephrotomy should first be tried in cases that are not advanced, in the hope that it may check progress by opening and draining the abscess cavity. Nephrectomy may be performed later if strength improves or if lardaceous disease

threatens. He adds: "It is in the scrofulous kidney especially that we so much need the means of ascertaining the working capacity of the other kidney, and it is in these cases also that the difficulty of doing so is almost insuperable." Gross, from this point of view, recommends the operation in an early stage by means of a ventral incision, by which both kidneys can be examined, and of which he states the mortality to be 14.28 per cent. against 53.84 per cent. by lumbar method. Newman's tables, published in 1888, record two cases of nephrotomy for this condition in children, both of whom ultimately recovered, though one (Morrant Baker's) subsequently had the kidney successfully removed; and five cases of nephrectomy, four of which ended in recovery. To these may be added a case of Wright's in which at intervals nephrotomy, cystotomy, and nephrectomy were performed, the child dying with much ulceration of the bladder; and a case of Eve's, in which, in a child aged three years and nine months, nephrotomy was first performed, and seventeen days later the kidney was removed through a prolonged incision. The child recovered and was in perfect health seven months later. In the light of these results, it would seem that when abscess is large nephrotomy and drainage should first be tried, and later nephrectomy; but when indications of an early state of disease are tolerably certain, the two kidneys should be examined by means of a ventral incision, and if one be found healthy and the other extensively diseased, the latter should be at once removed.

The Therapeutics of Hot Drink.

Chronic indigestion is sure, sooner or later, to be followed by disturbance of the motor apparatus of the digestive tract, usually affecting more particularly the stomach, which reacts less readily to stimulation. (Med. Press and Circular.) There results a condition of impaired secretion, plus a greater or less degree of muscular atony, which must be combatted at an early stage if we wish to avoid an incurable degree of gastric dilatation. Among the remedies at our disposal hot drinks have, of late years, attained considerable vogue. The ingestion of tepid fluids exerts a marked sedative action on the gastric mucous membrane and often relieves the painful sensations following meals in chronic dyspepsia. Less recognized, perhaps, is the influence of hot drinks on the motor functions of the stomach. In the ordinary course of events nothing remains in the stomach six hours after a meal, and the presence of alimentary debris after that period indicates the presence of some degree of muscular paresis. This condition of things may be greatly benefited by the use of hot water with or immediately after meals; but in chronic cases, permanent benefit can only be obtained by perseverance, the treatment being methodically carried out for some months. As might be anticipated, the hot water treatment does not ameliorate the secretory defects in the same degree as the muscular weakness, but by maintaining the stomach in a hygienic condition we may, at any rate, hope to check further degradation of the peptic glands. The temperature of hot drinks should be from 105 deg. to 110 deg. F., and their employment is especially indicated in cases of hyperacidity associated or not with some degree of gastric dilatation.

Christian Science and Violation of the Law Regulating the Practice of Medicine.

The Paris correspondent of the Medical Record says that the practice of Christian science is regarded here by some of the leading members of the medical profession as an infringement upon or a violation of the law regulating the practice of medicine. The point has been made and the question is now asked: What constitutes illegal practice of medicine? The law exacts of whoever practises medicine on French territory two conditions: 1st, to be provided with a French diploma of doctor of medicine, or officier de santé; 2d, to be inscribed on the official lists. Therefore, whoever practises medicine on French territory without complying with both these conditions is liable to prosecution for the illegal practice of medicine. Doctors, regular graduates of a French faculty, who do register their diplomas at the Palais de Justice and have their names duly enrolled on the official lists, are also liable under the law. The practice of medicine *per se* is not confined merely to examining patients and writing prescriptions for them, nor to surgical manipulations or operations, strictly speaking; but extends to all kinds of medical advice—palpations, manipulations, examinations, the giving of electricity, magnetism, and whatever act or acts may pertain to healing or a method of cure. Exception is made in favor of curates, officiating priests, and sisters of charity, who, giving advice and care to their ill parishioners, neither signing prescriptions nor holding consultations, and giving their services gratuitously, are only doing acts of charity, which the law does not forbid and which the administration sanctions. If,

therefore, the Christian science "dodge" is a method of cure or pretends to be such, as it certainly does, it is a violation of the French laws regulating the practice of medicine, and those practising it are liable to prosecution under them. Furthermore, it is not only habitual praetice without a diploma that the law punishes; one act alone may render the offender liable to a condemnation

To Preserve The Perineum.

Oliver (Am. Medical Surgery Bulletin) states: It is my practice to introduce two fingers of the right hand into the vagina and with each pain stretch the perineum in advance of the head. I have often found extreme rigidity disappear in a few minutes under this treatment. The patient's attention being occupied by the severity of the pain, no objection is ever raised to this procedure. When the head begins to distend the vulva the real work begins, but full expansion has by this time been secured.

Two fingers are introduced behind the occiput and this part of the head is brought well down under the pubic arch. The diameter of the head passing through the outlet will thus be materially lessened and so also will be the tension on the perineum.

Surgically clean cloths, wrung out in hot water, applied directly to a tension perineum often secures good results.

Ocular Neuralgia.

Markoff employs instillations of a solution of potassium cyanide, or of quinine muriate, as morphine and cocaine do not meet the therapeutic requirements; the former is ineffective, the latter too ephemeral as to results, and also tends to induce neuro-paralytic keratitis.

Potassium cyanide solution should be of one-third to one-half per cent. strength, and kept in a dark bottle in a cool place; as soon as it loses its characteristic odour it becomes inert. Five or six drops suffice for an instillation and it should be used warm.

A ten per cent. solution of quinine muriate is best, for, unless prepared without acid, it either causes severe smarting or irritates the eye. Morphine muriate may be combined with the solution, if desired, in the proportion of one-twentieth per cent.

No ocular neuralgia will resist more than one or two of these instillations; the underlying cause may remain, but the pain is banished. If pain is not relieved fifteen minutes after an instillation, it should be repeated.

Gonorrhœal Inflammation of Joint Tendon Sheaths and Bursæ.

Nasse (Boston Medical and Surgical Journal) considers that this form of arthritis has many varieties, but he classifies them roughly under three types: One, characterized by pain as a most prominent symptom, with effusion into the joint, but with little affection of the capsule; another, considered more serious, in which the periarticular tissues are involved, there being little or no joint diffusion, although there may be deposits of pus or fibrino-purulent material; and a third, which is fortunately less common, but has the characteristics of pyemic joint suppuration, which may extend into the periarticular structures, resulting in cellulitis. These cases are probably not due to the gonococci, but to other pyogenic organisms. The inflammation of a tendon sheath he considered as common, either alone, or accompanying the arthritis, but with mild constitutional symptoms. The inflammation of the synovial bursæ resembles closely that of the joints and the tendon sheath, but the inflammation is less marked. He considers the treatment to be expectant, consisting of rest and compression, with immobilization, and only in the more severe cases should operative treatment on the joint be attempted, and particularly is this true during any stage of the activity of the original condition. It is usually possible to find the organism in the joints, he having found it in nineteen cases out of thirty, which were examined for this purpose. The fact is that these metastases usually come late, but not necessarily so, and the process is apparently dependent on the infection of the deeper layers of the mucous membrane of the urethra, rather than to any particular region. Sometimes trauma seems to play a certain part in determining the localization of the metastases.

Treatment of Ozena.

Dr. Campaired in the New York Medical Journal in summing up his results of the new treatment of ozena says:

1. At present the procedure is one which furnishes the most positive results in the treatment of ozena.

2. The sesult is shown subjectively by the disappearance of the fetor after the second or third injection of five or six cubic centimeters of serum recently obtained and employed according to all the aseptic and antiseptic rules; and objectively by the absence of dryness in the nasal fossae with diminution of the crusts and the increase of the nasal secretion.

3. Objectively, a change in the color of

the mucosa is noted, becoming redder, moist at times, and slightly congested and hyperemic.

4. The crusts are less hard, dry and extensive, and become more fluid, according as the number and dose of the injections increase.

5. The quantity of ten cubic centimeters proposed by Gradenigo is not free from danger, and this is so even in the weaker doses. For this reason it is necessary to use injections in gradually increasing doses with great care.

6. The treatment in question offers many inconveniences and dangers, but, on the other hand, it furnishes very positive results; therefore, it is proper that the study of the method should be carefully pursued.

Pathology of Fœtal Life.

Dr. Ballantyne, in a recent address on the pathology of antenatal life, said that a prolonged study of this subject had led him to the conclusion that the fœtus was liable to the same diseases as the infant, the child, and the adult. It enjoyed partial immunity from parasitic skin diseases, and was protected from external violence, and on the other hand was apt to be affected with certain maladies in an aggravated form, and it was exposed to one gross traumatism—parturition. Fœtal peculiarities were largely due to peculiarities of environment and physiology. In illustration of this, he described fœtal ichthyosis, general fœtal dropsy, fœtal ascites, hydronephrosis, cystic kidney, fœtal endocarditis, and showed a number of diagrams, sketches, and coloured plates. He had some years ago called this peculiarity of fœtal diseases their "potential mortality," that is, the fœtal environment and mode of life permitted the existence of an amount of disease quite incompatible with the maintenance of extrauterine life; the fœtus was potentially dead, and would die as soon as it was born. Fœtal maladies also differed in character as well as degree from those occurring after birth, for example, fœtal small-pox, in which the face was almost free of the eruption; crusts were seldom formed, and the cicatrices were but feebly marked, because *in utero* the skin was kept moist, and was not under the influence of light and air; fœtal typhoid fever, in which, probably because of the quiescent condition of the bowel and the infection being by way of the placenta, it was rare to find any intestinal lesion. At this point reference was made to the relation of the placenta to fœtal diseases. By means of the placenta the fœtus was able to live with several of its viscera in a far advanced stage of disease, while on the other hand it was exposed to fevers and microbic conditions affecting the mother, altered blood states, such poisons as lead, arsenic, morphine, alcohol.

From recent investigations it seemed possible that infection might occasionally find its way from the maternal blood through the amniotic fluid to the mouth and stomach of the fœtus, and being the most vulnerable of its organs, injury to it soon endangered the fœtal life. According to Porak it had the power of storing up certain poisons, but this, if it did not poison the fœtus, interfered with its own functions, and led to abortion or premature labour. The distinctive *post-mortem* change of the fœtus dying *in utero*, maceration rather than putrefaction, was also due to the intrauterine conditions preventing the access of air. He was quite certain that *rigor mortis* occurred. Probably every variety of neoplasm had been met with in fœtal life.

Chronic Nasal Catarrh.

Dr. O. B. Douglas says:

1. The nose is not an unimportant organ, as some have seemed to suppose, but physiologically and pathologically it is of the first importance.

2. Its position and functions expose it to injury and disease necessarily. Variable temperatures, chemical and mechanical irritants, as well as its normal flux perverted, tend to produce disease.

3. Its diseases yield to proper treatment as certainly as those of any other complicated organ.

4. So-called catarrh is not a disease *per se*, but a symptom or result of the other lesions.

5. Chronic nasal catarrh is usually due to nasal obstruction. By this I mean not necessarily an occlusion of a nostril, or even on obstruction to respiration, but simply a habitual contact of surfaces which are not normally so in contact.

6. Removing the cause is always the first step towards a cure, and this most frequently causes surgical interference. Local and general medication are secondary, though by no means of slight importance.

7. The nose and its diseases are deserving of more study that has been given them by the profession generally, because the consequences of neglect are far-reaching and serious, and the surgery requires skill and experience.

8. Chronic nasal catarrh, so-called, is not so difficult to cure as it has by many been supposed, for it is the result of removable causes in most cases.

Surgery of the Chest.

Dr. Samuel West has recently related two cases of serous pleural effusion which he treated by incision and drainage with successful results. (The Hospital, June 11th, 1898.) The first case was that of a lady, aged thirty-one, who had had an effusion for more than twelve months. Repeated aspiration having failed to cure this the chest was opened and drained as for empyema, and ultimately the patient recovered perfectly without chest deformity. The second case was that of a man, aged thirty-nine, who had had the right side of the chest full of fluid for twelve months. There was a strong family history of consumption, and the man himself was probably phthisical. Tapping of the chest, repeated three times, having done no permanent good, an incision was made into the pleura and a drainage tube inserted. No portion of rib was excised. The lung completely expanded in a week, except where the tube lay. The discharge became purulent. The patient ultimately returned to work in good health, but still wearing the drainage tube, which it was found impossible to remove. Dr. West alluded to the satisfactory way in which the lung had expanded in these cases though so long compressed—eighteen and fifteen months respectively. He protested against the notion that compression of the lung prevented the development of tubercle, or that tubercle tended to develop rapidly when the compression was removed.

Scientific Treatment of Gonorrhea.

Valentine has published an article upon "Chronic Gonorrhea," of which the following is a summary: (Medical News.)

1. There are no incurable cases of chronic urethritis.

2. All drugs suggested for the treatment of chronic gonorrhea are soon relegated to merited oblivion.

3. The only efficacious method of treating chronic gonorrhea is by dilations, as proposed by Oberlander, followed hy irrigations, without a catheter, of the urethra or bladder or both.

4. Urethral fever or other disturbance dose not supervene after urethral instrumentation followed by irritation.

5. Carefully conducted dilations and irrigations are not painful.

6. Gradual, careful pressure by dilators is preferable to the use of sounds in the majority of cases.

7. The effect of dilation is to stimulate absorption of the infiltrations.

8. Functional disturbance and nervous symptoms are improved very early in the treatment.

9. Chronic urethritis can be exceptionally diagnosed and successfully treated, but never pronounced cured without aid of the urethroscope.

Ocular Affections in the Early Stages of Syphilis.

Wilbrand and Staelin examined the eyes of 200 patients in the early period of syphilis. They found disease of the eyelids in twenty per cent. of the cases, viz., hyperemia ciliorum, edema and redness of lids, blepharitis ciliaris, slight ptosis, and the like.

The conjunctiva was hyperemic in seventeen per cent., abnormally pale in five per cent. In ten per cent. there were papules on the mucosa.

The cornea showed unilateral parenchymatous inflammation in one case; the sclera in one case showed bilateral episcleritis.

There was iritis in five per cent., complicated with choroiditis in two per cent.

The optic nerve was affected in fourteen per cent. of cases, the affections comprising hyperemia, neuritis, retrobullar neuritis, and neuro-retinitis.

There was moderate contraction of the visual field in thirty-six per cent., due mostly to the disturbance of the general condition.

Dr. Barbier of Paris, considers that in the treatment of diphtheria special indications are furnished by the degree of intoxication of the organism, as well as by certain infections associating their action to that of the bacillus of Loeffler. Thus microbial associations render the subject more sensitive to diphtheritic poisons, and the bacillus itself is more active. In cases of diphtheria with multiple agents of infections, recourse must be had to antiseptic irritations of the nose and throat. Diphtheritic intoxication will not only benefit by anti-diphtheritic orrhotherapy, but also by exhibiting therapeutic agents not less special (I do not say specific,) such as artificial serum, caffeine, and digitalis. Certain nervous phenomena are best combated by preparations of strychnine. In a word, symptomatic treatment is indicated in most accidents or complications in the course of diphtheria. This is a return to the good old doctrine of treating symptoms. It goes without saying that diphtheritic cases ought to be isolated, whether with associated infections or not; and as regards all diphtheria the most strict hygiene and prophylaxis must be exercised in private practice, and with all the more reason in the hospital.

The Causes and Treatment of Habitual Constipation.

Dr. Thomas S. Southworth, at a recent meeting of the N. Y. Academy of Medicine, read a paper with this title. (Pediatrics.) He said that from being regarded as a disease, *per se*, amenable only to drugs, constipation had come to be looked upon as due to various functional disturbances of the organism. Much had been written from a theoretical standpoint regarding the peculiar anatomical conditions found in the sigmoid flexure, but his own observations on this point had led him to the opinion that their bearing upon the occurrence of constipation had been greatly exaggerated. Among the prominent causes of infantile constipation are deficient muscular power, disturbed peristalis, and altered consistency of the fecal masses. To these must be added the absence of voluntary effort in the infant. The speaker said that constipation in most fairly nourished infants yielded readily to a simple treatment which was largely dietetic. The fecal masses themselves should be inspected, dissolved and broken up by the physician, and in some cases even subjected to chemical analysis. We should have more extensive analyses of the healthy, normal stools in the different periods of infancy so as to establish the variations within the limits of health. It had been shown that the milk of the nursing mother could be materially modified. The percentage of fat and the total quantity of the breast milk are the chief factors to be considered in connection with the subject of constipation. Too high a proteid percentage apparently produces looseness of the bowel and colic. The quantity of the mammary secretion could be increased by giving the mother more fluid food, such as cow's milk, cocoa, thin gruels made from corn meal and well cooked flour. The extracts of malt increase the quantity of fat. Regurgitation by the infant of small quantities of milk after nursing usually indicates that the fat percentage has been increased too far. If the constipation be coincident with stationary weight, supplementary feedings are indicated. The stools would be found made up of small, firm scybalæ which, when broken up, are found to contain no curds, and seem to be well digested. A constipated child may show a fair gain in weight. Good results sometimes follow the addition of cream to the dietary given before each nursing, when the stools are dry and hard. Regulation of the mother's bowels should be undertaken, and occasionally assists in remedying infantile constipation. The commonest errors in diet leading to constipation are the giving of insufficient fat or proteid, or an excess of proteid. This insufficiency may depend upon excessive or insufficient dilution with water. Many children who thrive to all appearances on commercial condensed milk are constipated in spite of the large quantity of cane sugar present, because, as usually diluted, the fat and proteids are very low and the unabsorbed residue very small. The deficiency in the proteids results in a poor development of the muscles of the abdominal wall and of the intestine. To increase the amount of condensed milk is to increase proportionately the amount of cane sugar, which is not always advisable. The alternative is to change the food or to add a teaspoonful of cream for each teaspoonful of condensed milk. The same difficulty might arise where plain milk was given much diluted with water, and might be remedied by increasing the quantity of milk by adding cream or by the use of "top milk." The addition of both fats and proteids proves the most serviceable in the larger number of cases. One part of condensed milk represents only $2\frac{1}{2}$ parts of ordinary milk. An error met with very commonly in artificial feeding is that of giving plain milk too little diluted. If dyspepsia does not ensue, there are usually colic and constipation, the stools being hard, and when broken up, showed undigested casein. The proper dilution of the milk and the addition of the cream will usually remedy the constipation. The use of well cooked oatmeal gruel or jelly may sometimes be of service as a dilutent for the milk. Certain non-alcoholic preparations of malt may occasionally be beneficial. The juice of half an orange may sometimes be given, twice a day, in the intervals of feeding, although it sometimes gives rise to troublesome urticaria.

Two special types of constipation remain to be considered. The first of these is the rhachitic, in which the diet must be regulated and the starchy elements reduced; the second, or that form of chronic intestinal indigestion characterized by large, light colored stools of the consistency of putty. The influence of habit in securing regularity of evacuation from the bowel has long been recognized, but is often not sufficiently appreciated. It has been found that if very young infants are placed over a warm chamber at regular intervals after feeding they will very quickly be induced to have regular evacuations. It is important that children old enough to sit at stool should be provided with a support for the feet, otherwise the abdominal muscles cannot be properly brought into play. Abdominal mas-

sage would be found peculiarly useful in training the bowel to act at definite periods. The child should be laid on the back and the warmed hand introduced from below upwards underneath some light covering. The tips of the fingers should then be carried from the ileo-cecal region in small circles up to the transverse colon, then across and down along the descending colon to the region of the cecum, and then the process should be repeated beginning at the same point as before. If the fingers are warm and the pressure is very light the child is not apt to cry. Five or ten minutes of such massage once or twice a day would usually be sufficient. No lubricant should be used, as it is desirabie that the tissues underneath should be moved. At the conclusion of the seance, the child should be placed upon the chamber. When there is crying with defecation, and sometimes in its absence, anal fissures should be sought for.

Dr. Southworth said that in his experience it was exceedingly rare to find a child who is artificially fed whose constipation cannot be remedied by an intelligent modification of the diet. At the beginning of the treatment the intestinal tract should be gently but thoroughly evacuated. For this purpose he preferred calomel in divided doses. It might be necessary at first to make daily use of mild laxatives during a gradual increase of certain elements in the previous diet, or the addition of new substances; but the laxatives should be reduced as soon as possible. Tablets of rhubarb and soda, of each 1½ grains, made up with oil of peppermint, may be dissolved and given two or three times a day, especially in the cases dependent upon disturbed peristalsis. In some cases the fluid extract of cascara sagrada, in doses of one to four minims daily, would answer well. The fluid preparations of malt were also efficient laxatives, either alone or combined with cascara. Cod liver oil is a peculiarly serviceable remedy in those cases dependent upon poor nutrition, in which the addition of fat is indicated. In rather older children, where a more decided action is necessary, more active drugs might be required. For comparatively short periods enemata may be employed with advantage, but they are extremely liable to abuse. When used occasionally they may be large, but when used daily, the smallest quantity that would secure an evacuation should be employed. Experience seems to show that cold injections excite more energetic contractions of the bowel than warm ones. Saline solution is less irritating than plain water. One teaspoonful of glycerine to a tablespoonful of water would be found an excellent means of securing a proper evacuation. Gluten or glycerine suppositories are useful, but medicated suppositories, when necessary, should be made of cocoa-butter, and the proportion of ingredients controlled by the physician's prescription; they should not be made up with glycerine.

The Cæsarean Section versus Fœtal Mortality.

Dr. Edward Reynolds, in a paper read before the College of Physicians of Philadelphia, says:

1. That in women who are the subjects of viscereal disease or other previous ill-health, and in women who are exhausted by long labor, the maternal mortality of the Cæsarean section is too great to allow of its performance in the interest of the child alone. 2. That in primiparæ with moderate contraction the decision whether or not the Cæsarean section should be performed as an alternative operation at the beginning of labor in preference to an attempt at an intra-pelvic delivery, is a decision which is intrinsically so difficult that it should be attempted by none but the most experienced obstetricians. 3. That in most such cases of moderate contraction in primipær it is best to wait until the progress of labor teaches us which is to be the safer operation in the given case. 4. That when any healthy woman has lost one child by a difficult operative labor in the hands of an expert she should in the next labor be prepared for Cæsarean section and delivered by it, unless the course of labor shows that from some changed condition—e. g., a small child or a more favorable position—a forceps delivery is likely to be easy. 5. That when any case occurs in the practice of the comparatively few men who are really experienced in both obstetrical and abdominal surgery, in which an attempted forceps operation proves to be exceptionally difficult and version promises no better results, the forceps operation should be suspended, and, if the fœtal heart is undisturbed, should be abandoned in favor of the Cæsarean delivery. 6. That in very small pelves—e. g., those under three inches and a quarter in the conjugate—the Cæsarean section in favorable circumstances is the operation of preference.

In what has been so far said he has restricted himself to the practice of specially experienced men, but he would recommend to the general practitioner the following rules for his guidance:

1. No man should recommend or undertake the Cæsarean section unless he is able

to make preparations adequate for the performance of any abdominal operation and to secure proper assistance. 2. In unfavorable cases the maternal mortality of the section is too high to justify its performance for the sake of the child alone. 3. In the present state of obstetrical knowledge there must be many cases of high delay in primiparous labor in which no difficulty is anticipated until the delays which would be incident to the procuring of a consultation, and the subsequent preparations for the Cæsarean section would necessarily be fatal to the child. In such cases, the maternal mortality being about equal, the child's best chances lie in the application of one of the only operations which can be done immediately—*i. e.*, the forceps operation or version—but in the subsequent pregnancies of the same woman the pelvis should be measured during pregnancy, and, even if no contraction is found, preparations for a Cæsarean section should be made before the woman is allowed to go into labor. 4. When any practitioner is consulted by a patient in whom a previous labor has resulted in the delivery of a stillborn child by high forceps or version performed for simple delay—*i. e.*, in the absence of obstetrical emergencies—the pelvis should be measured and the question of the performance of the Cæsarean section should be settled in advance of labor upon the rules already laid down. 5. The decision as to the choice of operation is the only point in the matter which demands exceptional experience, and, a decision that the Cæsarean section is indicated having once been reached, the operation itself may be performed by any man who has had a fair experience in abdominal surgery.

Does Pepsin Act in an Alcoholic Medium?

The American Medico-Surgical Bulletin states that this question is answered in the affirmative and in the negative by different observers. While some claim that pepsin loses its activity in even the weakest alcoholic medium, considering the various wines and elixirs of pepsin worthless preparations, other clinicians, among them the eminent therapeutist, Prof. M. A. Robin, positively assert that this is not the case; the elixir of pepsin of the French codex gives them good results. Symey' experiments seem to furnish a satisfactory reason for the difference of opinion existing between the chemists and the clinicians. He has shown that the inhibiting action of the alcohol exist only when the pepsin and alcohol are in a glass (or similar) vessel. Something entirely different occurs when the glass vessel is replaced by a moist animal membrane. The alcohol at once begins to diffuse through the membrane, and in a short time the pepsin begins to exert its solvent action on the albumen. After two hours the amount of albumen dissolved was nearly equal to the amount of albumen dissolved by pepsin in a medium which contains no alcohol at all. It is therefore not contra-indicated to prescribe pepsin in a weak alcoholic medium.

School Hygiene.

The New York Board of Health has approved of certain recommendations which Dr. Biggs, the bacteriologist to the Board, has suggested that it should make to the Board of Education. Among these are the following: 1. The use of slates, slate pencils, and sponges shall be discontinued in all the public schools. 2. According to requirement, pupils shall be supplied with pencils and penholders, each pupil to retain those received in a box provided for the purpose, such box to be marked with the pupil's name. Pencils and penholders shall not be transferred from one pupil to another without suitable disinfection. 3. All school property left in the school building by a child suffering from any contagious disease, and all such property found in a room occupied by a family in which a case of infectious disease has occurred, shall be taken by the Health Department for disinfection or destruction. 4. Books which are taken home by pupils shall be covered regularly each month with brown manilla paper. These regulations would appear to be somewhat stringent in character, but there is no doubt that scope exists for more precautions than are at present taken in our Board Schools. Notification has done much to minimise the spread of infectious disease, but it is attention to details such as the foregoing that will eventually stamp it out.

The Influence of Morphine, Ether, and Chloroform on the Progress of Labor.

From observations made in the Clinic at Keil, Dr. H. Hensen, comes to the following practical conclusions: (American Medico-Surgical Bulletin).

Morphine in doses of 0.005 to 0.02 (1-12 to 1-3 grs.) has no influence whatever on the pains or on the pressure of the abdominal muscles.

Ether causes in from one to two minutes a diminution in the strenght of the pains and a prolongation of the intervals between the pains. In five to twenty minutes after discontinuing the ether the pains commence with the same strength as before.

Chloroform also diminishes the pain and the pains the same as ether does, but the latter has a great advantage over the former. Whlie after ether the activity of the uterus is re-established in a few minutes, after chloroform the uterus sometimes fails to contract for as long a period as two hours.

It is therefore of importance that in obstetrical operations, such as forceps-extraction, turning, etc., where a speedy re-establishment of uterine contractions is highly desirable, ether and not chloroform should be employed. Many a hemorrhage following uterine inertia may be ascribed to the employment of chloroform.

An Essential of the Art of Medicine.

Dr. J. H. Musser, in his address in Medicine, at the Denver meeting of the American Medical Association, said:

The closing years of the eighteenth century and the early years of the nineteenth century marked an epoch in medicine as transcendant for its welfare as the events of the past decades bespeak for the glory of the medicine of the future. The state of medicine in the eighteenth century was described as the result of deductive methods of reason, made possible because of the want of instruments of precision. Elaborate classification of disease and refinements of symptomatology which serve only to amuse and appall were the result. The sway of the imagination and the rule of theory were all powerful. Speculative modes of treatment were referred to. Venesection, polypharmacy and stimulation were followed by expectant treatment and nihilismus.

The limitations of the inquiry in diagnosis were outlined, Diagnosis was an intuition and an art. Cullen said theory could control observation. But medicine as a science was no higher nor lower than cognate departments of knowledge.

The development of the other sciences was outlined. Science was not applied to industrial arts at this time, and so they were carried on by rule-of-thumb methods. Medicine ceased to be deductive; its practice began to be scientific.

The development of medicine during the present century was outlined. Medicine has grown to be a science—a department of the science of biology. The history is the history of the application of scientific habits of thought to experiment, observation and analysis. Medicine grew to a science by the labors of physicians who were naturalists. The influence of inductive reason on other sciences was elaborated, and its effect on theology, history and sociology, stated.

Clinical medicine, as a science, embraced diagnosis and therapeutics. Methods of diagnosis of the present day require a scientific habit of mind and skill in the use of instruments of precision. The scope and positivism of diagnosis was shown, as fifteen diseases can now positively be recognized, without any possibility of error. Diaghosis has grown to be scientific, precise and positive. Error in methods leads to error in diagnosis. Therapeutics grew to a science by the influence of various forces, all the outcome of the mode of thought of the naturalist. Natural history of disease first described; disease self-limited. The science of statistics showed the fallacy of determining the value of a drug from a small number of cases. Analysis of 12,000 prescriptions showed that various drugs were called for about 31,000 times, and preparations of nux vomica, iron, opium. mineral acids, cinchona and its salt, mercury, ipecac, bismuth, belladonna, arsenic, squills, hyoscyamus and digitalis were called for in one-third of the total, and if external remedies and excipients are excluded, in one-half.

Scepticism arose because too much was claimed. The more incurable the disease the greater the number of drugs claimed to cure it. The more virtures a drug is said to have, the less its probable value. Polypharmacy was assaulted in the past, but still holds sway. The treatment of diphtheria by antitoxin was the only scientifically established mode of therapeusis.

Drugs have no doubt an action in health and disease. Their use may be of advantage, but usually is not necessary. We need not be sceptical about the power of the drug, but about its necessity. Some say we are robbed of the power of mental expectancy if drugs are not given. Such expec-ancy and hypnotism, for therapeutic purposes, can be secured by an honest examination of the patient. The "lie" is not required in medicine any more than in religion, as Zola points out.

Application of science to industrial art at the present time shows in every department that scientific methods are necessary. Brewing, iron making, leather making are no longer arts but sciences. Art is gone; science holds sway. Large amonnts of capital involved, and great competition, have forced out the element of chance as in art, and instituted the element of certainty that approaches in the science.

As the essential to the art is the science of medicine, we must educate our students to a scientific habit of thought.

On the Effect and Uses of Alcohol in Childhood.

C. Baron, in a recent issue of the Edinburgh Medical Journal, relates first the harm occurring to children from the administration of alcoholic beverages in health, passing then to its medicinal value when exhibited in disease, and asserts that only very few indications for its administration can be found, the most important indications being the affections of the respiratory apparatus, bronchitis, pneumonia, œdema of the lungs, diphtheria—which diseases are accompanied by high fever or by a great demand on the functions of the heart and lungs, when the various properties of the alcohol combine in producing its well-known favourable effects; for here we not only make use of its stimulatiug qualities on the cardiac function, its influence in increasing the number and depth of the respiratory act, and the lowering of blood pressure, but also of its power to reduce the temperature, and to economise albumen.

In erysipelas, ordinary type, surgical fever, great loss of blood, etc., alcohol is frequently indicated. The number of cases in which the undesirable effects of alcohol predominate are, however, much more numerous. Above all do diseases of the brain and of the nervous system fall into this category, beginning with simple forms of nervousness, and passing through the more severe forms of epilepsy, chorea, etc. In like manner is alcohol contra-indicated in heart disease, nephritis, cystitis, enuresis, in rheumatic and similar affections in diseases of the liver, of the gastro-intestinal tract, and in chronic conditions.

Baron does not support the view of Grosz, who looks upon chronic disturbance of the nutrition as an indication for the use of alcohol. In these cases also we had better avoid the use of alcohol, especially as these anæmic, scrofulous, rachitic children are frequently extraordinarily sensitive to even small doses of alcohol. Baron has observed, after the administration of a saccharine solution of iron and manganese, in a number of children, cephalalgia, insomnia, etc., due to the cognac contained in it for its preservation, while other preparations of iron which did not contain alcohol could be administered with impunity. We are well able to do without alcoholic beverages in chronic diseases, and are well supplied with plenty of valuable reconstructives in the various milk preparations, whey, eggs, malt preparations, iron, quinine; while stimulants, beef tea, bouillon, coffee, (in gastric affections Russian tea) in addition to those in our pharmacopœia, are plentifully to be found as substitutes.

In those cases, however, in which alcohol is indicated, we may usually rely on the heavy wines (Tokay, port wine, madeira, sherry, marsala); cognac and rum will only be necessary in patients who have been previously addicted to beer and wine. The dose should be regulated, according to Ewald—twenty drops for a three months old child; fifty drops for one six months old; one teaspoonful for nine months old; one and a half teaspoonful for a twelve months old; one children's spoonful for patients two to three years old, three to four times daily. Children suffering with diphtheria are able to bear much higher doses.

The Infectivity of the Urine in Typhoid Fever.

The fact that the urine of patients suffering from typhoid fever may contain the typhoid bacillus in large quantities, though it has been established by the observation of several observers, has not, perhaps, attracted the attention which it deserves. Wright and Semple, according to the British Medical Journal, published a paper on the subject nearly three years ago, in the Lancet, in which they stated that in 6 out of 7 cases examined the bacillus was easily detected in the urine, and they pointed out the important bearing of the observation on practical hygiene. Last year Dr. P. Horton Smith read a paper at the meeting of the Royal Medical and Chirurgical Society, in which he showed that the bacilli might be present in the urine at some period of the disease in enormous quantities. He never found them in the first or second week. Dr. J, Petruschky, Director of the Bacteriological Institute at Dantzig, has recently examined the urine in fifty cases of typhoid fever, and in three he found the bacillus in enormous numbers, in all cases late in the disease. The bacilli persisted in the urine after defervescence for a period more or less prolonged—in one case for two months, in another for four weeks, and in another for eight days. The fact that the urine may be infectious to man was established by an unfortunate accident which Dr. Petruschky relates. The sister of the ward accidentallly drank a small quantity of urine which had been passed by a typhoid patient into a wine glass, and after an incubation period of twelve days she developed typhoid fever. The subject is one which appears to require further investigation, more especially as to the period of the illness at which the bacilli may be expected most probably to appear in the urine, since if it should turn out that they are present as frequently as Wright and

Semple suppose during an early stage, the bacteriological examination of the urine might be a valuable aid to diagnosis in doubtful cases. The facts already known, however, are quite sufficient to emphasize the importance of disinfecting the urine and of instructing nurses and others about the patient to exercise the most scrupulous care in disinfecting their hands, or any vessels which may have become contaminated with urine.

An Unusual Complication during Anæsthesia.

The occurrence of epileptiform seizures during an anæsthetic is not very rare, but a fatal result following upon it is, happily very uncommon. Snow. says the British Medical Journal, recorded a case of tetanus in which he administered chloroform, but, although he pushed the anæsthetic to as deep a degree as seemed safe, no relaxation of the jaw muscles could be obtained. This patient died twelve hours later. The same observer found that in patients who were the subjects of epilepsy the inhalation "very rarely" produced any approach to a fit. When given during an epileptic seizure, Snow found the convulsions ceased. In certain cases spasm of the glottis has been believed to have resulted in death, and to have been caused by the pungency of the vapor of the anæsthetic presented to the patient. But such instances as have been recorded are probably not in any sense a true spasm of the glottis, leading to asphyxia. It has been shown that the glottis, although momentarily set in spasm, practically always in the case of chloroform relaxes, and death, if it results at all, does so from the specific action of the drug. Apart from these epileptiform conditions, another of a far graver and more significant character was pointed out as occurring in the historic case of Hannah Greener, the first recorded instance of death under chloroform, which occurred on January 28th, 1848. The symptom referred to is a slight struggle occurring just before the fatal result; this commonly takes place suddenly, and when consciousness seems hardly to have been lost. In Snow's experiments he found that a similar shuddering struggle was produced in the lower animals by giving them chloroform by inhalation in concentrated vapor. In this case also the spasm or struggle occurred before insensibility had supervened. In a case which occurred in the Cottage Hospital at Ross, the patient, according to the report of the inquiry published in the Hereford Times, was an alcoholic subject, aged 30, who was being anæsthetised preparatory to an operation upon his knee. A mixture of two parts of ether and one of chloroform was being given from an inhaler. As soon as the inhaler was applied, violent struggling commenced and persisted, although the inhaler was withdrawn, and in less than 4 minutes the man died. The patient's father stated at the inquest that his son had previously had a similar "fit" and during it grew stiff and rigid. At all events all attempts to restore respiration failed. Such a mixture from an inhaler is a possible cause of giving an overdose, especially during struggling. It would be interesting to know if tracheotomy was done, and if it was successful in allowing air to enter the lungs. The man appears to have been in a very bad condition at the time of the occurrence.

The Prevention of Tuberculosis.

The British Medical Journal, June 25, 1898, publishes an account of a meeting of leading members of the profession in London, both physicians and surgeons, on June 22d, to consider whether the time has not come for a public movement having for its object the repression of tuberculosis. Sir William Broadbent, at whose house the meeting was held, said that the questions to be submitted to the meeting were, first, whether the moment was not opportune for the formation of a society to disseminate knowledge as to the modes in which tuberculosis was acquired, to enlist public interest in the adoption of such means, and perhaps especially to promote the establishment of sanatoria; and, secondly, whether such a society should be limited to the medical profession or extended to embrace members of the general public who took or might be induced to take, an interest in the matter. Mr. Malcolm Morris made a short statement as to the organizations which exist in France, Belgium, and America, with the object of checking the spread of tuberculosis. Dr. Herman Weber, Dr. J. E. Pollock, and Dr. Theodore Williams expressed the opinion that the time had come for the formation of a society of all persons interested. In this view the meeting concurred, and a resolution to this effect was adopted *nemine contradicente*. Dr. Ransome observed that much had already been done in Great Britain to diminish mortality from pulmonary consumption, and both Prof. Corfield and Mr. Shirley Murphy referred to the considerable powers possessed by sanitary authorities, and concurred in the opinion that a society which would arouse public interest would be of great service in strengthening the hands

of public-health officers. Dr. Heron, observed that it would be very desirable to obtain the co-operation of the chairmen of Boards of Guardians. A small provisional Committee was appointed to make arrangements for holding a public meeting, and after a vote of thanks to Sir William Broadbent, moved by Dr. Holman and seconded by Dr. W. M. Ord, had been adopted, the meeting separated.

The Physiological and Pathological Relations between the Nose and the Sexual Apparatus of Man.

Dr. John N. Mackenzie (British Medical Journal) states that an intimate physiological relationship exists between the sexual apparatus and the nose, and especially the intranasal erectile tissue, is evinced from the following facts: (1)In a certain proportion of women, whose nasal organs are healthy, engorgement of the nasal cavernous tissue occurs with unvarying regularity during the menstrual epoch, the swelling of the membrane subsiding with the cessation of the catamenial flow. (2) In some cases of irregular menstruation, in which the individual occasionally omits a menstrual period without external flow, at such times the erectile bodies become swollen and turgid, as in the period when all the external evidences of menstruation are present. (3) The monthly turgescence of the nasal corpora cavernosa may be bilateral or confined to one side, the swelling appearing first in one side and then in the other, the alternation varying with the epoch. (4) The periodical erection may be inconsiderable and give rise to little or no inconvenience, or, on the other hand, the swollen bodies may occlude the nostril and awaken phenomena of a so-called reflex nature, such as coughing, sneezing, etc. (5) In some cases there seems to be a direct relationship between the periodical engorgement of the nasal erectile bodies and the phenomena referable to the head that so often accompany the consummation of the menstrual act. (6) As a natural consequence of the phenomena above described, the nasal mucous membrane becomes, at such periods, more susceptible to reflex-producing impressions, and is, therefore, more easily influenced by mechanical, electrical, thermic, and chemical irritation. (7) The condition (engorgement and increased irritability of the nasal mucous membrane) indicated above, together with the phenomena that accompany them, are also found during pregnancy at periods corresponding to those of the menstrual flow. There is also reason to believe that similar phenomena occur during the lactation and menopause. (8) Vicarious nasal menstruation is a familiar condition. It may precede the uterine flow, or it may occur from suppression of the normal flow. (9) This vicarious hemorrhage may represent menstruation during pregnancy, or it may appear toward the close of menstrual life, or after the removal of the uterus and its appendages. Vicarious nasal hemorrhages also occur in boys at or near the age of puberty. (10) There is a well-known sympathy between the erectile portion of the generative tract and other erectile structures of the body. (11) The occasional dependence of phenomena referable to the nose during sexual excitement. The data derived from clinical observation are as follows: (*a*) In a fair proportion of women suffering from nasal affections the disease is greatly aggravated during the menstrual epoch, or when under sexual excitement. (*b*) Cases are also met with in which congestion or inflammatory conditions of the nasal passages make their appearance only at the menstrual period, or at least are only sufficiently annoying at that time to call for medical attention. (*c*) Occasionally the discharge from nasal catarrh will become offensive at the menstrual epoch, losing its disagreeable odor during the decline of the ovarian disturbance. (*d*) Excessive indulgence in venery seems to imitate inflammation of the nasal mucous membrane. (*e*) The same is true of the habit of masturbation. (*f*) The co-existence of uterine or ovarian disease exerts sometimes an important influence on the clinical history of nasal disease.

On the Contagion of Tertiary Syphilis.

Tarassevitch, according to the Practitioner, distinguishes between the contagion from late secondary lesions and that from true tertiary manifestations, a distinction which is of importance from the practical, as well as from the theoretical point of view. Secondary lesions are contagious, however late they may show themselves, and it is not uncommon to see them ten years after the appearance of the initial lesion; they have been met with twenty-three and even twenty-nine years after. It is worthy of note that the mild cases, but with a tendency to frequent relapses, are those which remain contagious for the longest period, and which, further, may give rise to serious and grave syphilis. There are numerous clinical and experimental observations in accordance with the opinion that syphilis arrived at the tertiary stage completely loses its virulence, and is not capable of transmission; but these

negative facts afford ne absolute proof. Recent ooservations show, on the contrary, that husbands who are without doubt suffering from tertiary syphilis, as proved not only by the development of gummata of the lips, sclerosing glossitis, but the date of appearance of these symptoms fourteen or twenty-one years after the chancre, can contaminate their wives under conditions that preclude the possibility of other sources of contagion. It is undeniable that in the majority ef cases time enfeebles the virulence of syphilis, and that consequently tertiary lesions are infinitely less dangerous than the chancre or secondary manifestations; but it is impossible to explain why this virulence should sometimes be sufficient to give rise to contagion even after a long period of the secondary stage. In observations concerning late syphilitic contagion, it is usually found that it is the husband who infects the wife, the contagion usually taking place in the first few months after marriage; if it appears later, the fact is explained by the absence of manifestations in the husband, by the temporary latency of the disease, or possibly because the husband, aware of the risks he is incurring, takes precautionary measures, which succeed for a variable period of time. The genital tract is that by which the contagion ordinarily occurs, but the greater the lapse of time from the outbreak of the disease, the more important part does the buccal region begin to play, and after ten years, nearly half of the cases may be ascribed to this source. Consequently the hygiene of the buccal region ought to take a large share in the prophylaxis of syphilitic contagion, bad hygiene and the abuse of tobacco being provoking agents, and favoring the buccal lesions of syphilis. The use of tobacco ought to be modified in every syphilitic patient, and even forbidden in those cases in which syphilis recurs and localizes itself in the mouth. In old syphilitic subjects the more trivial lesions, such as herpes, or erosions and abrasions, whether localized in the mouth or on the genital organs, ought to be held in suspicion. It is advisable to make chronic syphilitic patients follow out a course of treatment before sanctioning their marriage, till the lapse of five or six years from the inception of the disease. Such treatment is indispensable if the patient has been inadequately treated, if the syphilis has been of long duration, and if the last course of treatment dates a long while back; while, paradoxical as it may seem, it is especially called for if the attack has been slight from its commencement, for syphilis gains in its duration what it lacks in its intensity.

Tuberculosis in Fishes.

The frequency of tuberculosis in cattle, especially milch cows, the extreme susceptibility of rabbits and guinea pigs among rodents to artificial inoculation with cultures of the bacilli, and the occurrence of the disease both spontaneously and by accidental infection among fowls, have all been well known for many years, but that fishes were susceptible does not seem to have occurred to any one. (Lancet.)

M. Dubar, M. Batailon and M. Terre, however, reported to the Academie des Sciences an instance of this which is not only probably unique, but presents several points of great scientific interest. The sputa and dejecta of a woman in an advanced stage of pulmonary and intestinal tuberculosis having been thrown into a fishpond many of the carp were observed to swell and die, and on examination their livers and spleens were found to be filled with tubercle bacilli. Others experimentally fed with tuberculous matter from human subjects, rabbits and fowls, died with the same appearances in two to three weeks and the bacilli of the diseased fish were equally iufective to others which devoured them. But when ingested by, or inoculated into, rabbits and fowls the results were negative, the explanation being obviously that they had been so attenuated by cultivation in the colder blood of the fish as to have lost their virulence to warm blooded animals.

Fish must therefore be more susceptible than even rodents, though the conditions under which they live offer few opportunities for infection, those of the carp in a confined pond being in fact artificial. Under any circumstances, however, the danger of the communication of tuberculosis from the use of such fish as food must be infinitesimally small should this attenuation of the virulence of the bacilli be a constant phenomenon.

Auto--Intoxication, with Reports of a Case in an Infant of Fifteen Months.

Dr. Hamill at a recent meeting of the Philadelphia Pediatric Society described the limitations within which this term should be applied, and spoke of the various methods by which the organism protects itself against the self-formed poisons, especially emphasizing the excretory function of the gastra-intestinal mucous membrane. He suggested the possibility of a selective excretory tendency on the part of the various emunctory organs, that is, the ability on the part of certain ones of them to dispose of poisonous substances which are incapable of being eliminated by any of the

others. He endeavored to demonstrate the fact that ptomain poisoning cannot be classed among the auto-intoxications, and protested against the present promiscuous and unjustifiable use of the terms leukomain and ptomain poisoning. The case reported was a 15-months'-old infant, who, after having had an attack of what seemed to be acute gastro-enteritis, gradually developed a condition of depression eventually amounting almost to coma, which was accompanied by thirty-two hours' suppression of urine. The first urine voided after the recovery contained no albumin nor sugar, and had a specific gravity of 1012.

Puerperal Sepsis.

Dr Mundé, of New York, in his presidential address at the American Gynecological Society, said that at the present time it was customary to distinguish three varieties of puerperal sepsis, viz: (1) Sapræmia, or that variety in which the septic focus remained localized; (2) septicæmia, in which the streptococci found their way into the general system; and (3) pyæmia. While in the first form the products were usually putrid, in the second there was commonly no offensive odor or peculiar pathological discharge. Owing to more enlightened methods of treatment, the pyæmic variety was at present quite rare. In the majority of cases in private practice the infection came from the fingers or instruments of the physician or nurse, and sometimes from the clothing. He believed that at times pathogenic germs were sucked in the vagina by a change in the position of the patient. He had seen one instance in which there seemed to be little doubt that the infection of the parturient canal came from a discharging felon on the patient's hand, as she admitted having used one finger of that hand to relieve a vaginal pruritus. Another source of trouble was the retention of the discharges by flexion of the uterus. It was sometimes the custom in private practice to refrain from making any vaginal examination trusting entirely to the external examination. This was perhaps wise if the attendant had reason to doubt the aseptic condition of his hands, but with the usual precautions taken before an abdominal section it should be possible to clean the fingers sufficiently to admit of carrying out the old fashioned method of making a vaginal examination, every effort should be made to secure thorough evacuation of the placenta and clots from the uterus after delivery, and to keep the uterus well and firmly contracted. The symptoms of puerperal septicæmia were usually those characterizing septic infection elsewhere. The prognosis was grave in those cases in which the virulence of the infection was indicated only by elevation of temperature and rapid pulse. To make a correct diagnosis it was absolutely essential that the genital organs be carefully examined. A speculum examination might show a yellow or brownish discoloration of the cervix and vagina. The first indication for treatment was to remove all foreign substances from the endometrium, either with the fingers or with the blunt curette. The uterine cavity should then be irrigated with potassium permanganate, a dilute solution of chloride of zinc, or peroxide of hydrogen solution, diluted one-half. In very bad cases of septic endometritis he was in favor of using a curette, either dull or sharp, but he used the latter on the puerperal endometrium only when the dull curette failed to remove the decidua. It was much better to apply a strong solution of chloride of zinc, tincture of iodine, or a solution of phenol, washing out the cavity and packing it with iodoform gauze afterward, than it was to indulge too freely in curettage. When the uterine cavity was empty and clean, there could be no advantage in keeping up intrauterine irrigations; if the temperature remained elevated, it was evident that the condition was one of general and not local infection. If the patient could be kept alive by the administration of alcoholic stimulants, and by the use of strychnine, caffeine, and nourishing food until nature could throw off the invading germs, the physician would gain the victory. Dr. Mundé said that he had no faith in quiniue as an agent for reducing the temperature in cases of puerperal fever or for favorably influencing the infection, but he did not hesitate to give phenacetin, in doses of from three to five grains, combined with caffeine, when the high temperature seemed to warrant it. The ice bag or cold coil to the abdomen was a potent means of reducing the temperature. His experience with serum-therapy in puerperal sepsis was limited to three cases, but all of these were apparently desperate and had resisted all of the usual measures. The patients were given from three to six hypodermic injections of ten cubic centimetres of the serum, at intervals of from four to twelve hours, and all three recovered. He felt that in a severe case of puerperal sepsis, in which the streptococci had evidently passed beyond the genital organs, and in which the usual measures proved impotent, the serum treatment should be tried. He would treat general, puerperal, purulent peritonitis by a combination of the vaginal and abdominal operations. He

favored treating pelvic exudates, first, by cold, and afterward by heat and blisters, until it was evident that suppuraaion had begun; for he had seen many instances of complete restoration of the organs to their normal function, even when he had felt almost sure suppuration would occur. If the source of infection was in the uterus and appendages, and could not be removed in any other way, complete hysterectomy was justifiable, but it was not easy to decide when this indication was present.

Nervous Bronchial Asthma in Childhood.

Kissel has lately had five cases under his care in the Olga Children's Hospital, Moscow. (British Medical Journal.) The ages of the children varied between 9 and 10 years. There was a strong neurotic family history in most of the cases. The attacks of asthma occurred only in the winter months. They usually began with a copious expectoration of mucous: rhonchi could be heard all over the chest during a paroxysm. There was no signs of rickets or any malformation of the chest wall. All the viscera appeared to be normal, and between the attacks the children appeared to be well. Kissel has made an exhaustive examination of the cases of asthma published by various authors. The reflex asthma caused by adenoid growths he does not admit amongst cases of true nervous asthma. Again, cases of tubercular bronchial glands at the bifurcation of the trachea are said to cause asthma; twelve cases have been published by Biedert and Litting, half were children and half adults; in no instance was bronchial asthma observed during life, yet at the *post-mortem* examination the bronchial glands were much enlarged. Bathez and Sanné also published cases in which the bronchial glands were enlarged *post-mortem*, but in which no evidence of asthma was observed during life. The clinical picture in cases of enlarged bronchial glands resembles whooping-cough more often than asthma; the peculiar cry, and sudden onset of the dyspnœa, together with the whoop during inspiration, are points which have been noted by several observers as occurring in cases of enlarged bronchial glands. Henoch says that in cases of compression of the vagus and recurrent laryngeal hoarseness is frequently met with, and also spasmodic cough associated with noisy inspiration, resembling whooping-cough. Certain indefinite nervous affections, he says, are also met with, and rarely cases of asthma. Kissel maintains that true nervous asthma exists in children as well as in adults, but he admits that it is rare. He has worked out some statistics with regard to the number of cases of asthma occurring in the various children's hospitals—twenty in number. Amongst 21,528 in-patients there were 6 cases of asthma; amongst 214,712 out-patients there were 7 cases. The towns selected were Vienna, Breslau, Dresden, Bern, Stockholm, London, Philadelphia, Zurich, Berlin, Paris, Buda-Pesth, Stettin.

Uterine Fibroids and Acetonuria.

Bossi (Archivio di Ostetricia e Ginecologia, Naples, vol. iv, Part 4), in his valuable paper on the Process of Absorption of Uterine Fibroids, states that he detected marked and prolonged acetonuria during the retrogression of fibroids after oophorectomy or ligature of the ovarian arteries. (British Medical Journal.) Hartmann and Fredet also observed a distinct excess of acetone in the urine of their patients after ligature of the uterine arteries. They think it proper to note, however, that evidence as to the normal excretion of that compound and as to acetonuria after anæsthesia and in disease, remains defective. Chemical tests, too, are difficult in this case, and require an expert, is the favorite test for acetone (Legal and Chautard's) reliable. Becker has found that acetonuria is common, though not constant, after anæsthesia by any of the usual compounds. Argenson detected half a gramme of acetone in a litre of urine ($7\frac{1}{2}$ grains to $1\frac{3}{4}$ pint) after chloroform narcosis. The same observer found a slight excess of acetone in the urine of a patient suffering from rectal cancer, and others have seen the same in cases of malignant tumours. In conclusion, marked acetonuria is certainly seen where uterine fibroids are undergoing absorption, but the exact significance of the phenomenon has not been explained. Bossi and Hartmann do not assert that it represents direct molecular disintegration of the "fibroid."

The Alkalinity of the Blood in Epileptics.

Charon and Briche record the results of a number of observations made along two lines. (British Medical Journal.) In the first series the number of attacks was recorded hour by hour for 10 days in 130 epileptics and compared with the diurnal variations in the alkalinity of the blood. In the second series saline solutions of two different strengths were injected subcutaneously daily for 9 or 10 weeks in 8 cases, in order to ascertain if any alteration in the number or character of the attacks resulted. The solutions contained 1 in 40 or 1 in 10 of salts respectively, and in either case the salts were four-fifths neutral-phosphate of

sodium and one-fifth chloride of sodium. It was found that the blood of epileptics exhibited constant diurnal variations, the maxima and minima being in direct relation to the amount of work done by the digestive apparatus. The epileptic attacks presented equally constant numerical variations, isoshronous, and in inverse proportion to the alkalinity of the blood. Repeated saline injections did not permanently modify the degree of alkalinity of the blood. The produce are extremely brief elevation in its alkalinity, an elevation which disappeared within an hour, during which time there was no attack. The net result of the injections was to diminish the number of isolated attacks and to favor their occurrence in bouts. They did not reduce the total number, and any influence which they exerted upon their severity was in the direction of increase. They as a rule increased the postparoxysmal psychical disturbances, and in certain cases provoked outburst of a maniacal nature.

Treatment of Hypertrophy of the Prostate

Dr. C. C. Jacobs (Inter. Jour. of Surg.) says that one-third of men, after reaching the age of 55 years, suffer from enlarged prostate, and it behooves every physician to familiarize himself with the nature and technique of the operation which will afford the best chance for relief of this ailment. He classifies the treatment under three heads: 1. Attempts to bring about atrophy of the gland by castration; 2. Ablation or excision of the gland; 3. Making an artificial urethra, thus providing a physiological rest for the gland, which is said to bring about a "disappearance of the hypertrophy." Dr. Jacobs says that the ideal operation would be the removal of the third lobe of the prostate and the destruction of any bar to the outflow of the urine, and that this could be best done through a suprapubic incision. In those old cases, complicated with cystitis, ureteritis, or pyonephrosis, the best results follow the making of a suprapubic urethra as suggested by Dr. McGuire. Through an incision made just above the symphysis an opening large enough to admit the index finger, is made into the bladder, a catheter is then inserted and left in situ until the wound has contracted to the caliber of the normal urethra. If the operation has been properly done the patient can retain or eject his urine at will. Dr. Jacobs advocates strongly suprapubic cystotomy as against perineal section or castration. If the patient is seen before the secondary infection of the bladder has taken place, protatectomy may be properly taken into consideration. But in conclusion he says that the "rest" treatment, accomplished by means of a suprapubic urethra, gives the best chance for success.

The Electro-Therapeutics of Rheumatism.

Dr. Rainlar, in Codex Medicus: The electro-therapeutics of rheumatism are referable more specially to the sub-acute and chronic forms. In acute articular rheumatism no form of electricity is to be recommended. It is very valuable in the subacute and chronic forms and in gouty conditions.

There are five different modifications or phases of the current: (1) galvanism, (2) faradism, (3) static or Franklinic, (4) sinusoidal and combining the first two, (5) galvano-faradic. Of these forms the galvanic, faradic, galvano-faradic, and static forms, are the most reliable in the rheumatic condition.

There are two ways of applying electricity: (1) constitutional, and (2) local. General or constitutional galvanism acts as a tonic or stimulant to the entire system. The local application to a muscle causes contraction and increased blood supply, thereby increased nutrition.

Where there is much muscular involvement, a primary and secondary current from the foradic coil of about three to five minutes' duration, applied directly to the muscles is sufficient. At first use currents of moderate strength, the electrodes being well moistened with a saline solution, the current gradually being increased to the maximum power of endurance. This to be followed by weak, interrupted faradic primary currents.

Where the joints are affected galvano-faradic currents are applied over the joints from ten to fifteen minutes' duration. In almost all cases of sub-acute rheumatism at least two sittings per week are necessary, while chronic cases require daily or not less than three treatments per week.

Case I. This case had previously been in bed for six weeks with inflammatory rheumatism. Subsequently the wrist-joints became enlarged and painful on pressure, and some of the extensor muscles of forearm were atrophied. A course of galvanic with occasional use of slowly interrupted primary faradic current, was kept up for two months, when the case recovered without deformity.

Case II. Had severe pain in lower part and back of thighs. Pain so bad often had to lie in bed. Great pain on rising from bed in the morning. There had been a history of rheumatism.

Galvanism was applied to back, the anode being placed on the upper dorsal and cervical regions and the cathode over the lumbar. At the end of three months' treatment no tender spots or pain was present.

Case III. Patient female, age 34. Complained of loss of power in left leg. His tory of rheumatism. Muscles of calf of leg and thigh much wasted, cold and moist. Sensation much impaired. Pain more intense when in bed and sitting erect for any length of time, Galvanism to entire limb was used every day, and at end of two weeks the pain ceased entirely. The atrophied muscles had increased in size and contractile power. Applications then made every two days, when limb soon reached its normal condition.

Dangers of Blisters.

Huchard entertains the following opinion concerning blisters:

1. They often produce an open wound, which facilitates secondary infections or the absorption of cantharides.

2. Besides the tending to cause inflammation of the kidneys and bladder, they have a general congestive action.

3. Even in those diseases where they are most frequently used, such as pneumonia and pleurisy, they should be discarded, because though they increase pulmonary ventilation, they increase also pulmonary congestion.

4. Blisters tends to arrest excretion by the kidneys, so important in all infectious diseases, and this is especially harmful in these normally causing albuminuria. Instead of aiding the excretion of toxins, blisters are likely to produce a fresh intoxication.

5. The only real use of blisters is in their revulsive and analgesic action, but this effect is better attained by less dangerous means, such as mustard plasters or cold baths.

Narcotics.

The Journal of Inebriety in its April edition says:

Investigations in France go to show tha the mortality among the children of women working in tobacco is considerably more than double that of children of other working women.

Of 1000 cases of morphine habit—650 men and 350 women—the medical profession supplies forty per cent.

Morphinomania occurs most commonly between twenty-five and forty.

The cocaine slave is far more depraved than the alcoholic. He has no moral sense. He will lie for the mere pleasure of lying, and will steal without purpose.

Patients should never know that they are taking cocaine. It should not be prescribed for asthma, hay-fever, etc., conditions in which it is, at best, merely palliative.

"Knock-out drops" are found to be uniformly highly concentrated solutions of chloral.

Bromides used for their sedative effects should be accompanied by hot baths and saline.

Chloral should not be combined with bromides for sedative effects upon inebriates.

Stop bromides with fall of temperature and feeble heart.

Tuberculosis of the Mesenteric Lymph Glands.

According to Peterson, Tuberculosis of the Mesenteric Lymph Glands is more often a primary lesion than secondary to tuberculosis of the intestine. (The Hospital, June 25, 1898.) He has treated three cases by opening the abdominal cavity and closing it again; glands being removed for microscopical examination, but no attempt made to excise the whole mass. To account for the good results of laparotomy, he inclines to the views of Nannotti and Bacciochi, that cœliotomy produces phagocytosis and formation of new vessels, followed by resorption, and the surrounding of the tubercle with connective tissue. His conclusions are: (1) Primary tuberculous glandular disease (tabes mesenterica) is by no means uncommon; (2) while it may be, it is not, as a rule, secondary to intestinal tuberculosis; (3) the tubercle bacilli may pass to the mesenteric glands through the intestinal mucous membrane without leaving any visible lesions; (4) tuberculous mesenteric glandular disease may be congenital, and the tubercle bacilli may remain latent in these organs during long periods of time; (5) under favorable conditions, beginning tuberculous disease of the mesenteric glands can be diagnosticated without the presence of palpable tumors: (6) the glaudular enlargement may result in caseation or calcification; (7) in cases of caseation the danger of extension of the tuberculous process to the peritoneum is considerable; (8) it is not necessarily fatal if taken in time; (9) abdominal section produces powerful physiological changes in the peritoneum; (10) from the position of the peritoneum, lying, as it does, upon a bed of lymphatics, for which the mesenteric glands act as filters, there is every reason to believe that the same changes produced by cœliotomy on peritoneal tuberculosis will oc-

cur in the tuberculous mesenteric glands; (11) abdominal section should be advised in tuberculous mesenteric disease as soon as the abdominal symptoms make the diagnosis reasonably certain.

Amœbic Dysentery.

The British Medical Journal states that Harris has investigated thirty-five cases, most of which were chronic. In the chronic cases the temperature rarely rises above 101 degrees in the evening. Albumen was only once present, and peptones, albumoses, and globulins were always absent. The stools numbered from two to forty in the twenty-four hours, and varied in consistency according to the severity of the disease. In six analyses of the stools from two severe cases, large quantities of serum albumen were present. Liver abscess occurred twice, peritonitis twice, piles once and appendicitis once. Ten were treated with ordinary astringents, and five died; and twenty-five with rectal injections of hydrogen dioxide, of which eight recovered, four improved, four remained as before, and five died. One case recovered after injections of potassic permanganate. Amœbic dysentery is a disease of the poor, and is almost always associated with filth. The stools should be collected in a perfectly clean and warm vessel; it should contain no water. Urine is particularly damaging to the amœbæ. The amœbæ die in two to six hours after expulsion. They often die as rapidly at body, as at room temperature. They did not appear to be killed by saturated solutions of quinine sulphate or boracic acid, but an aqueous solution of quinine, one in 300, killed them in ten minutes; they were also killed by weak solutions of hydrogen dioxide, potassic permanganate and toluidine blue. Among the stains used toluidine blue was the best. In staining sections the author has first used eosin or benzopurine and then toluidine blue with good results. In one of the author's fatal cases the appendix was involved, its walls destroyed, and amœbœ present in the pus in and about the appendix. Two chief lesions are noted: (1) The submucosa shows marked changes, the mucosa being practically healthy, and (2) much less frequently the mucosa is eroded, and there is nothing abnormal beneath it. Thus changes in the submucosa may be traced in advance of surface ulceration. Amœbæ are found everywhere scattered throughout the diseased tissue. Very rarely a single amœba may be found in advance or the pathological changes. The amœbæ penetrate into the deeper layers of the intestine, but usually the peritoneum thickens more rapidly than the necrotic process extends. Hyperplastic tissue found in the disease is more resistant than the normal tissues. The author describes a hepatic abscess in which amœbæ were found. How the amœbæ reach the liver is doubtful, but they are probably brought by the portal vein. Harris then gives the symptoms of amœbic dysentery. The diagnosis can be made by finding the amœbæ. It is a very fatal disease. When it becomes chronic, as it most often does, the chances of recovery, even under the best treatment, are always bad. A severe attack may rapidly get better, or a mild attack get puickly worse at any period of the disease. Relapses are frequent. Liver abscess is a very fatal complication, and perforation and peritonitis always so. In the chronic disease opium checks the number of the discharges, but the author has never seen any permanent good from it. Sulphuric acid has in several cases apparently produced benefit, but never a cure. One patient recovered while taking salol. The author has never obtained any perceptible results from rectal injections of quinine, one in 5,000, but injections of 100 to 300 watery solution of bisulphate of quinine were somewhat beneficial in one or two cases. He has had good results from hydrogen dioxide injections. The ordinary hydrogen dioxide is diluted four to eight times with water, and about a quart injected twice daily. The diet should be liquid. The author uses milk alone, and occasionally, as a change, egg albumen. He thinks that amœbic dysentery would cease to exist with ordinary attention to sanitary laws.

Theories and Conclusions on the Modern Treatment of Tuberculosis.

Dr. Denison, of Denver, discussed this subject interestingly and intelligently at the Denver meeting of the American Medical Association. He said:

Representing the benefit to patients suffering from tuberculosis as 100 per cent. 45 per cent. are affected by climate and changes involving mental influence, exercise and out-of-door life; 30 per cent, are due to good feeling, local supervision, and medical treatment; 25 per cent. to inhaling, local medication, surgical interference, specific medication, and antitoxin treatment. So saturating the blood with creosote, for instance, that the bacillus will be stopped in its growth and the patient not be injured thereby, is, I think, a mere speculation. I doubt whether inhaled substances ever reach the air vesicles and terminal bronchioles where the disease is located. The more a

lung is diseased with tuberculosis and the accompanying infiltrating and shrinking process, the less is the possibility that inhaled medicaments can reach the affected parts. The reciprocal relation of diseased and healthy lung in the same thorax, and of the heart and blood within a given chest with reference to respiration, does not seem to me to have been sufficiently recognized by any one. I would like to demonstrate more clearly than has been done heretofore the fact that (1) correct inhaling, or, more properly, exhaling, (2) altitude above the sea level, (3) rightly directed gymnastic training, all, work on the same principle of mechanical distension of the air cells. We have failed to recognize the mechanical conditions within the chest which govern respiration and blood circulation. The blood does not flow alone because the heart pumps it, but because the lung mechanism draws it in and forces it out again. Any system of training to be of use must depend upon the mechanical distension of the air cells. I wish to make my protest against the surgeon's hasty interference in operating upon anal fistula while tuberculosis is in the lungs; it may be considered a means of elimination, and unless such elimination is provided for, an operation should not be performed. If the disease is due to a special toxin working in the system, it must be only through the development in that system of the proper antitoxin, or the appropriation of it from outside the body, that the disease may be opposed. The opposers of antitoxin are inconsistent in that while they admit the existence of a toxin, they deny the possibility of an antitoxin. I firmly believe a considerable percentage of cases of tuberculosis could be held in check, if not cured, if with the present advanced technic in the manufacture of the tuberculin preparations, the physicians using them had the required knowledge to determine what patients could be treated by this method and how far the treatment should be pushed. The serum treatment of tuberculosis is, as yet, a beautiful dream, which I hope may be realized. My conclusions are that combined methods are superior to any given branch of treatment; that seasonable change of residence to a well selected, high-altitude climate, with its possibilities of out-door life, is the best possible method for retarding the advance of consumption; that exercise is necessary to promote cell activity and distension of the cells; that it is a mistake to overwhelm the body with frequent injections of undetermined animal serums producing a cumulative toxæmia; that the key to the direct method of specific treatment comes through the skillful determination of the proportion of infection, the balance between vital resistance and the disease.

Surgery of the Lung.

Dr. Murphy, in his address on Surgery at the Denver meeting of the American Medical Association, stated that an analysis of the accomplishments in this special line of work was of great interest, the advancements having been made by individual and unsupported efforts. The profession at large had never entered into this field with the enthusiasm, persistency and energy with which it had invaded other fields, as the peritoneum, the genito-urinary and the osseous and nervous systems.

The author considered at great length the early history of lung surgery, after which he discussed the anatomy of the lung, the lymphatics, and the physiology of respiration.

In considering operations upon the lung several questions arise: (1) Is the lung, situated in its bone-bound cavity accessible to surgical manipulation? (2) What are the difficulties and dangers encountered in entering this bony cavity? (3) To what extent may this wall be removed and replaced, and what latitude of manipulation is permitted in the chest? (4) What will be the effect of opening the pleura of pneumothorax in cases of adhesions, and without adhesions? (5) How can its dangers be avoided or lessened? (6) Should the pleura be closed or drained? (7) Can the lung be incised, excised, or defunctionalized? (8) In pneumotomy, what are the dangers? They are hemorrhage from opening in the chest, and pneumothorax from opening the bronchi; also pleuritis of the same and opposite side, and traumatic pneumonia, and sepsis. (9) What are the pathological conditions of the lung requiring excision? They are hernia, infected injuries, abscesses, bronchiectasis, gangrene, the removal of foreign bodies, tubercular cavities, hydatids, and actinomycosis. (10) In pneumotomy, what are the dangers and limitations? They are (immediate) hemorrhage, pneumothorax, and dyspnœa; (secondary) shock, dyspnœa, hemorrhage, sepsis, pleuritis, and pneumonia on the opposite side.

The author dwelt upon the best method of treating the intra-thoracic stump, and of drainage and closure. He also expatiated upon the pathological histology of repair of the stump, etc. (11) How is the chest filled after excision? What are the pathological conditions in which excision is desirable or required? They are neoplasms

of the chest wall involving the lung; circumscribed tuberculosis. (12) How may the lung be defunctionalized artificially and quiescence maintained? By injections into the pleural cavity, and by resection of the ribs which allows the chest wall to collapse; thoracotomy with separation of pleural adhesions and compression of the lung. (13) What are the technical difficulties of intrapleural injections? They are adhesions and consolidations. What are its technical dangers? They are air embolism, subpleural emphysema, pulmonary emphysema, dyspnœa and sepsis. (14) How can we determine that the injected material is passing into the pleural cavity and not into the lung tissue or bronchus? What is the most desirable material to use for injection? What are the effects of this pulmonary quiescence on the healthy lung? What are effects of this pulmonary quiescence on the diseased lung, particularly in tuberculosis? How long must the lung remain functionless that the process of repair in tuberculosis may be complete? Are pleuritic effusions beneficial or prejudicial to the repair of tuberculosis of the lung?

Pathology indicates and clinical experience justifies resection of ribs to allow collapse of the lung. The same conditions demand thoracotomy with separation of adhesions and compression of the lung. What are the dangers of operation on, and injuries to the chest wall? They are shock, hemorrhage, pneumothorax and sepsis.

Shock, hemorrhage and sepsis were considered at length. He also touched upon the following subjects: hernia of the lung and its treatment; wounds of the lung; infective lesions of the lung, their etiology and treatment; abscess of the lung and its treatment; bronchiectasis; gangrene of the lung; foreign bodies in the lung; tuberculosis of the lung; incision and drainage of tubercular cavities; hydatid cysts; actinomycosis of the lung; neoplasms of the chest wall and lung requiring pneumectomy.

Dr. Murphy gave an exhaustive numerical summary of the cases operated on, both by himself and other eminent surgeons, as collected from the literature of the subject, for the following conditions: gangrene of the lung; abscess of the lung; bronchiectasis; tuberculosis of the lung; foreign bodies in the lung; neoplasms of the lung; and gave the results, favorable or unfavorable, of the various operations.

The Color of Negro Children When Born.

Pidiatrics comments upon a recent discussion in France as to the color of newly born Negro children. It is probable that scarcely one out of a million white laymen would, if asked this question, be able to answer it correctly. The large majority of the medical profession, too, are ignorant on the point. Not that it is a matter of great moment, but in these days when one's knowledge is expected to be absolutely accurate, it is satisfactory to have even the most minute details made clear. On the authority of Dr. Farabery, whose statement will doubtless be supported by many medical practitioners who have had experience in Negro obstetrical practice. "The Negro baby at the time of its birth is exactly the same color as its white brother, and it shows signs of color only after an interval usually of several days but often extending to many weeks." Some little time ago, says an English journal, there was an exhibition in the Champ de Mars of a Soudanese village, the colony of which numberes several hundred persons as black as ever were born. An eminent French physician saw there an opportunity to settle this vexed question, and he thus expresses his deductions: "The Negro baby comes into the world a tender pink color; the second day it is lilac; ten days afterward it is the color of tanned leather, and at fifteen days it is chocolate. The coloring matter in the case of the Negro lies between the layers of the epidermis. This pigment is semi-fluid, or in the form of fine granulations; in the Indian it is red, and in the Mongolian yellow. It is influenced not only by sun and by climate, but by certain maladies and the Negro changes in tint just as the white person does.

The Hunterian Lectures on Surgery of the Kidney.

Henry Morris thus summarizes his lecture delivered at the Royal College of Surgeons of England on Renal Calculus: the Difficulties and Errors in Diagnosis in their Relation to Exploration of the Kidney; Unsuspected, Quiescent, and Migratory Calculi (British Medical Journal):

The conclusions at which I have arrived are the following:

1. That the aim of the surgical treatment of renal calculus should be to extend the application of nephrolithotomy, and thereby restrict the necessity of nephrotomy and nephrectomy.

2. That more frequently than not the failure to find a stone is not in reality a failure of treatment, because there are so many curable morbid conditions which mimic renal calculus, and which are discoverable only by exploration.

3. That the theory that a stone in one kidney, whether that kidney is itself pain-

ful or not, reflects or transmits pain to the opposite kidney is quite unproved; that it is a dangerous theory, calculated to lead to very erroneous practice; and that the surgical principle with regard to exploratory operations should be that with pain, paroxysmal or continuous, on one side only, the kidney on the painful side should be explored.

4. That nephrectomy for calculous conditions is not often called for, and should be done only in exceptional cases. Nephrotomy for calculous pyonephrosis is the proper operation, at any rate as a primary operation, because of the frequency of double calculous disease. Experience has shown that kidneys from which stones weighing eight hundred and thirty grains and one thousand three hundred grains have been removed are functionally sufficient to maintain life during the blocking of the ureter or suspended action of the kidney of the opposite side.

5. That nephrectomy while the opposite organ is occupied by calculus is fraught with the greatest danger to life; whereas nephrectomy, after the opposite kidney has been freed of stone, will probably be followed by recovery from the operation and possibly very good health for many years afterward.

6. That when renal calculus causes reflected or transferred vesical or ovarian pain, the removal of the calculus will be followed by complete cure of the bladder or ovarian symptoms.

7. That in some cases renal calculous conditions are attended by very remarkable nervous symptoms, sometimes with, sometimes without, high temperature, and that information as to the cause of these symptoms is needed.

8. That unsuspected renal calculi are a source of very real danger to their possessors; and when, whether by accident or by the systematic examination of the urine, we have cause to suspect the presence of a calculous, we should recommend its removal, regardless of the fact that it is not causing renal or transferred pain.

9. That quiescent calculus is as dangerous to the individual as unsuspected calculus, and ought to be removed by operation.

10. That the hitherto accepted teaching, that a renal calculus, if causing only mild symptoms, or attacks of severe colic of only recent occurrence, should be treated on the expectant plan, ought to be discarded as unsound in theory and dangerous in practice.

11. That the same principle should be applied to renal calculus which has long been the rule in regard to vesical calculus —namely, when suspected it should be searched for, when known to exist removed, without waiting in the hope that it may become encysted or spontaneously expelled.

12. That the very low mortality of nephrolithotomy puts this operation upon the same footing for renal calculus as lithotrity in the most experienced hands for vesical calculus.

The Sympathetic Nervous System in Infancy.

The following deductions are cited by Dr. M. G. Conger, who remarks that the sympathetic nervous system is the first of all the physical systems of the new-born to begin an independent life (America Midico Surgical Bulletin.)

1. The different systems of the infant are but partially developed, functionally speaking, save the sympathetic, which at birth is as nearly perfect as at any time later.

2. Each system of the body has a certain work to perform in maintaining life and in resisting disease.

3. The effects of the sympathetic, the most nearly perfect system, are so much greater in proportion than that of the other systems that when the body is attacked by disease we have, as it were, a confusion of the parts of the same army, with a consequent conflict among those parts, instead of a concerted effect against the common enemy.

4. Our effort in treating disease of the infant, using the same simile, in the main should be directed towards keeping the different systems in harmony and to aid them in overcomping the disease.

5. Lastly we may have the region of one plexus of the sympathetic excited while another plexus is under an inhibitory influence, necessitating a very careful selecting and application of medicines.

Digestive Disorders of Children.

The value of listerine in those digestive disorders of childhood, which lead to what is commonly called cholera infantum, can scarcely be overrated. A teaspoonful of listerine administered per oris has been known to dissipate the most alarming symptoms, cutting short the attack and apparently saving life. A good way is to begin something like this: Calomel and chlorate of potash each one grain, to be rubbed well together and to be divided into ten powders, one to be given every five minutes until vomiting ceases and the nature of the stools have been changed; then commence and give teaspoonful doses of listerine every four hours until convalescence.—Medical Progress.

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HIGHEST AWARDS WHEREVER EXHIBITED.
IT CONTAINS NO CANE SUGAR, NO GLUCOSE, NO MALT.
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OF TO-DAY AND WILL CONTINUE
TO YIELD SATISFACTORY RESULTS IN NUTRITION
FAR INTO THE FUTURE, BECAUSE ITS MERITS HAVE BEEN
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SOLD BY DRUGGISTS EVERYWHERE.

The Use of Alcoholic Drinks.

Dr. F. H. Wade makes the following remarks in regard to whisky and beer:—After many years' of careful study of the subject in all its bearings, I am firmly convinced that, for the reasons which I shall give, whisky is the least injurious and, therefore, the safest and best, of all the alcoholic liquors for men to use. I am perfectly well aware that many high medical authorities are of the opinion that drinks containing the smallest percentage of alcohol, such as beer and wine, are, for that reason, the least injurious. Doubtless this would be true of an equal quantity of those mild fluids as compared with equal quantity of distilled liquors, but a man who drinks beer will take a great number of glasses of it in the course of a day—in some instances as many as twenty-five or thirty, or even more. The whisky drinker, on the contrary, will not take more than three or four of his favourite tipple in a day. As a consequence, the beer drinker takes a great deal more alcohol into his stomach and has much larger quantities of it constantly in his blood and tissues than the whisky drinker. The more constantly alcohol is present in the system the more quickly does it ruin the nervous system, the liver, kidneys, bladder, blood-vessels, and heart.

The man who drinks two or three quarts of beer or wine a day but is never "under the influence of liquor" in his whole life, is much more certain to feel the evil influence of alcohol upon his system than he who does not touch liquor for two or three months, and then gets upon a "whisky drunk" which lasts for several days or a week. Occasional excess in anything injurious is not so detrimental as constant indulgence.

By the excessive quantity of fluid which the heavy beer or wine drinker takes he imposes a much severer task upon his kidneys and bladder than does the drinker of distilled liquors. It is a statement frequently made that it is not the moderate use of alcohol which does harm, but the abuse of it.

The reply of a clairvoyant to a gentleman who had sent a lock of his hair to facilitate a correct diagnosis of his disease was: "You are suffering from an ovarian tumor, and must be operated upon immediately."

Acute Dilatation of the Heart in Rheumatic Fever.

Dr. D. B. Lees (London Medical Society) presented a paper on this subject, the object of which, he said, was to draw attention to the fact that an acute dilatation of the heart was a common occurrence in a rheumatic attack, even when arthritis and pyrexia were slight in amount, and apart from endocarditis and from pericarditis; also that an acute dilatation might, in a more severe attack, intensify the signs and symptoms of pericarditis or endocarditis. (British Medical Journal). The evidence adduced in support of these propositions consisted of tracings of the cardiac dulness at different stages of a rheumatic attack taken by the author from patients under his care at St. Mary's Hospital. The question was first discussed whether it was possible by percussion to obtain an accurate knowledge of the actual size of the heart. Reference was made to the writings of Dr. Ewart, and to the *post mortem* investigations of Dr. Herringham in support of the contention that a tracing representing the outline obtained by careful percussion did indicate with very considerable accuracy the position of the limits of the heart, both to left and to right. The first three sets of tracings were taken from young adults suffering from subacute rheumatism, with slight arthritis and little pyrexia wih no evidenee of pericarditis or distinct endocarditis. Three tracings of the cardiac dulness were shown from each of these cases, the first taken before commencing treatment, the third taken on recovery, and the second at an intermediate stage. They all showed the same phenomenon—a large extension of the dulness at first, with gradual reduction and final return to the normal. Next followed a set of tracings showing acute dilatation caused by a subacute attack in a heart already diseased by two previous attacks. The large extension of the cardiac dulness registered in the first diagram was seen to subside until it reached a permanent amount due to the previous disease. Lastly a pair of tracings taken from a case of rheumatic pericarditis with chorea showed how acute dilatation might intensify the signs of pericarditis, and how a rapid diminution in the area of the precordial dulness might occur under treatment. It was claimed that these tracings, though doubtless open to criticism in details, were sufficient to prove that acute dilatation of the heart was a feature of rheumatism which deserved more attention than it had hitherto received. Reference was made to remarks on "swollen heart," by Dr. Sansom; also to specimens of dilated heart after rheumatism by Dr. Goodheart and Dr. West; also to Dr. Goodhart's paper on acute dilatation of the heart after scarlet fever, and to a case of the same kind reported by Dr. Barlow. It was suggested that the acute cardiac dilatation produced by rheumatism was analogous to the acute dilatation often resulting from influenza, and that in both cases it was due to the poisonous action of a microbic toxin on the cardiac muscle, similar to the effect of dilute solutions of lactic acid and of certain drugs in causing cardiac dilatation, demonstrated many years ago by Dr. Gaskell.

Electricity in Incontinence of Urine.

Capriati (Edinburgh Medical Journal) records a case of involuntary enuresis successfully treated by means of the currents introduced into medicine by Morton, of New York. These are known as induced static currents and are furnished by the oscillatory discharge of Leyden jars connected with an electrical machine. The patient is not insulated, but is connected with one of the jars, while the other is connected with the earth. The intensity of the current is regulated by merely altering the distance between the jars. Capriati's patient was a previously healthy man of 35, who was gradually attacked by weakness and wasting in the left leg, with club-foot and exaggerated knee-jerk on that side. There was no reaction of degeneration, but incontinence of urine was very troublesome. The author considers the symptoms to point to limited lesion of the spinal cord in the lumbar region. At first galvanism was tried with the kathode over the dorso-lumbar spine, and the anode on the perineum; this was continued for 10 minutes daily for more than 20 days without any benefit resulting. Endo-urethral faradisation (Guyon) was next adopted, but was so painful that it had to be abandoned after two sittings. Finally, Morton's currents were used in conjunction with the spino-perineal galvanisation. Immediate relief followed, and after the treatment had been carried out every other day for two months, cure was complete as regards the incontinence. As galvanisation by itself had proved ineffectual, the credit must be given entirely to the method of static induction. It was extremely well borne when used in the manner laid down by Bordier. A sound, the end of which formed an electrode, was introduced into the urethra as far as the sphincter of the bladder, and its free end was attached by a chain to one end of the Leydon jars; the machine was regulated to give 6 to 8 sparks a second, and each sitting lasted 5 minutes.

Practical Evidence.

I used your sample of Resinol on myself for Pruritus Ani, which has been my curse for several years, defying all applications. The first application proved efficacious, and I am now using and prescribing Resinol for the above and several other itching troubles. In fact, I think it is the best remedy I have ever used for the diseases for which it is recommended.

H. B. LEIGHTON, M.D., Boston, Mass.

I have used your Resiuol in Inflammatory Rheumatism with happy results. Hope others will try it. I know they will be pleased.

E. J. BURNSIDE, M. D., Phila., Pa.

It gives me pleasure to say that Resinol is the best application for local treatment of Eczema I have ever used. I can also bear testimony to its efficacy in Erysipelas, and its soothing and healing virtues in all inflamed surfaces.

A. S. FRENCH, M.D., Lawrence, Mass.

It is but just that I should attest my satisfaction with the use of Resinol. It is a marvel of efficacy in Pruritus Ani. In relief of soreness, due to scalding from acute Nasal Coryza, it acts like a charm.

J. H. THOMPSON, M.D., Goshen, N.Y.

Resinol is by far the best application I have ever used in a practice of 48 years for the diseases recommended. A case of Eczema commencing on the scalp and extending over the entire face and which had been under the treatment of various physicians with no apparent benefit, was completely cured by it in less than two weeks.

J, J. WORTHY, M.D., Lavalle, Wis.

I am very much pleased with the effects resulting from the use of Ung't Resinol in cases of Itching Piles, Pruritus Ani, and Vulvae, Eczema, Erysipelas, &c. In fact it is the remedy "par excellence" in all cases where there is a Congested or Hyperaemic condition of the capillary Blood Vessels. C. D. SMITH, M.D., Atlanta, Ga.

I frequently prescribe Resinol, and am well pleased with its work. It has proved very useful in many forms of eruption of the skin, and especially so in Pruritus Vulvæ or Ani, and in Eczema of other parts of the body.

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I take pleasure in stating that I have found Unguentum Resinol almost a specific for Pruritus Ani, Itching Piles and Marginal Eczema.

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Resinol is a harmless antiseptic and a true skin anæsthetic, absolutely non-irritant and non toxic (free from lead, mercury, or cocaine), can be applied to mucous, excoriated or denuded surfaces of any extent at any age without fear of untoward results, and is not contra-indicated by any internal medication that may be deemed advisable.

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A Lively Meeting of the Texas State Medical Association.

The thirtieth annual session of the Texas State Medical Association at Houston, April 28th, 29th and 30th, was enlivened by a fist fight on the rostrum. A big burly fellow from Galveston sought to whip the secretary for calling him a liar out loud in meeting, when he had risen to a point of personal privilege and complained of having been dropped from the roll of membership for non-payment of dues which was in accordance with the bylaws.

Picric Acid Dressing on the Umbilical Cord.

Rochon (British Medical Journal) points out that three kinds of dressing are applied to the cord, the oil, the moist and the dry. To the first he objects that it is imperfectly antiseptic, and is opposed to the keratogenic transformation of the young epidermic elements; the second method is sufficiently antiseptic, but it delays the fall of the cord, and often leaves an imperfect cicatrix; while the third, by the rapid desiccation of the cord which it causes, produces the danger of premature separation and hemorrhage. He proposes the following: The cord is surrounded by a piece of absorbent cotton, soaked in a 1-200 solution of picric acid. Thus the decomposition of the cord is prevented and cicatrisation of the umbilicus is aided. A single dressing may suffice, but it is best to repeat it on the second or third day.

The Government veterinary surgeon at Melbourne has been demonstrating in the pastoral departments of the colony the efficacy of the tuberculin test as a means of diagnosing tuberculosis in cattle. The larger stockholders are recognising the value of the test, and are gradually applying it to their herds. The killing of the diseased cattle in the presence of dairymen and others, with the after-exhibition of the tuberculous character of the disease, is eloquent evidence of the reliability of the test in the very early existence of the disease. Stock breeders are beginning to see that the export trade of frozen meat can only benefit by the publicity given to these demonstrations, as the English consumer would be more likely to support the produce of a country where attempts were being made to minimise the extent of this disease, and would appreciate the efforts made to stamp it out.

Contract Medical Practice.

The Connecticut State Medical Society, at New Haven, May 26, 1898, adopted the following resolutions:

"Resolved, That the Connecticut Medical Society declares it to be derogatory to the dignity of its members to render professional services at a stipulated fee per capita per annum, to the members of any lodge, society, association, or organization, or to enter into any contract for such services with any lodge, society or organization, provided that professional services rendered any hospital, dispensary, orphan asylum, town poor, or other public charity, shall not be prohibited by this act.

"Resolved, That any member of this society violating the above resolution is guilty of a breach of professional etiquette, and is subject to the rules and regulations governing the same."

The Connection between Nasal and Ocular Diseases.

Dr. Stiel (Journal of Laryngology, Rhinology and Otology).

The connections between nasal and ocular diseases are essentially of three kinds. The first consists of reflex ocular disturbances, lachrymation, photophobia, scotoma, ophthalmic migraine, and especially asthenopia. Even though the direct proof of the connection of subjective ocular disturbances is not easily established from objectively proved nasal disease, yet the practical experience of a connection cannot be disputed. The second consists of an internal connection between the nose and eye, through the direct communication of the conjunctival sac with the nose by means of the tear duct. The lachrymal duct opens in the inferior meatus and consists of a membranous covering from the mucosa, of sub-mucous and cavernous tissue like that covering the turbinate. Inflammation in the nose, hypertrophy of the inferior turbinate, ulcerative processes, cause swelling of the cavernous tissue of the lachrymal duct with stenosis, and as a result stagnation of tears in the tear duct. Bacteria increase and cause inflammation of the tear duct walls, producing dacryostenosis and dacryocystitis. As a result preliminary treatment of the nose should precede probing and washing out of the tear duct. The third consists in the respective connection between nose and eye. The contents of the orbit which are surrounded by the accessory sinuses of the nose, so that inflammation of these, owing to their thin walls, can easily spread to the eye. Every gradation from simple collateral hyperæmia to orbital abscess and cellulitis has been observed. It has been proved that orbital abscess is usually secondary to disease of the antra.

There is displacement of the eyeball in the opposrte direction from the situation of the abscess, disturbance of movement and pain. The reverse may occur; inflammation from the eye may spread to the nose. This is rare.

Meeting of the American Medical Association.

At the Forty-ninth Annual Meeting of the American Medical Association the following officers were elected for the ensuing year:

President—Joseph McDowell Matthews, M. D., Louisville, Ky.

First Vice-President—W. W. Keen, M. D., of Philadelphia, Pa.

Second Vice-President—J. W. Graham, M. D., of Denver, Colo,

Third Vice-President—H. A. West, M. D., of Galveston, Texas.

Fourth Vice-President—J. E. Minney, M. D., Topeka, Kansas.

Secretary—William B. Atkinson, M. D., of Philadelphia, Pa.

Treasurer—Henry P. Newman, M. D., of Chicago, Ill.

Members of the Board of Trustees—Alonzo Garcelon, M. D., of Maine; I. N. Love, M. D., of St. Louis, Mo.; H. L. E. Johnson, M. D., of Washington, D. C.; X C. Chappel, M. D., of Boston.

Next place of meeting, Columbus, Ohio.

Nose-Bleeding.

Dr. Lermoyes advises, in slight cases of nose-bleed, compressing the nose between the thumb and forefinger for ten minutes; if that be insufficient then apply locally a tampon moistened with a 10 per cent. solution of antipyrine, which is an excellent hæmostatic and much superior to cocaine 1.5, which latter not only has the disadvantage of being toxic, but also of being possibly followed by further hæmorrhage after the vaso-constrictor action has passed away. It is also to be preferred to solutions of iron chloride, which are strong irritants and may give rise to gangrenous ulcers. In more severe cases a canal speculum is introduced, and the anterior portion of the nose tamponed with fine strips of iodoform gauze four inches in length and one in breadth. These are introduced with fine forceps. As the hæmorrhages nearly always arise from the anterior portion of the nasal cavity there is no necessity of tamponing far back. Tamponade of the posterior nares is not only entirely unnecessary, but often brutally dangerous.

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POWDER LOCALLY IN LESIONS ULCERS SKIN DISEASES DUST OVER SURFACE, IN INFLAMMATIONS USE WARM POULTICES OVER AFFECTED SURFACE.

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PROMPT PAINLESS PLEASANT LAXATIVE.

STRONG NERVINE: ABSOLUTE ANESTHETIC ANTIDOTE TO MORPHINISM THE ONLY SUPPORTIVE ELIMINANT.

TABLETS THE MOST POWERFUL DIGESTANT OF ALL THE ELEMENTS ENTERING INTO THE ORGANISM. RELIEVES DYSPEPSIA, FLATULENCE, COLIC AND INTESTINAL DISORDERS CONVERTS PROTEIDS INTO BLOOD PLASMA. NOURISHES STRUCTURE CELLS AND FUNCTION.

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SEND FOR LITERATURE.

Hot Air Treatment of Joints.

Dr. Charles H. Frazier (Annals of Surgery) gives his conclusions after using some 300 baths to test its efficacy. The apparatus described does not differ in principle from the ordinary forms which are at present much used. The time given to the bath varied from three-quarters to one hour, care being taken to keep free ventilation for the escape of moisture; and if necessary, the limb was wiped off during the bath to insure its dryness. The temperature of the bath averaged about 300 deg. F., and in one instance it registered 375 degrees without discomfort on the part of the patient. Dr. Frazier considers, first, the probable pathological conditions in the joint to be dealt with and classifies these into (1) those of rheumatic origin, (2) those of tubercular origin, and (3) those of traumatic origin. In the rheumatic, the synovial membrane, ligaments, cartilages, and periarticular structures are all involved to a greater or less extent, and consist of thickening with slight injection, and with hyperplasia of the ligamentous structures, which interferes with the movements of the joints. The cartilages are frequently rough, and present erosions. In tubercular joints, there is also a general involvement of all the structures. In the chronic traumatic forms, the articular structures are stiffened with plastic exudate, which afterwards forms a fibrous tissue and adhesions, which are the results of blood clots, or an exudation, which bind together the folds of the synovial membrane, or the articular surfaces.

Judging the individual case from this point of view, the author considers that the gain to be accomplished may be accurately judged in the different cases, if the effects by the prolonged use of heat are regarded. The results of this heat are a diffuse hyperæmia of the skin., showing a dilatation of the capillaries; there is usually the sensation of a numbness of the part, which he considers due to the action of the heat on the superficial sensory nerve filaments; the body temperature of the patient is about one-half to one degree above normal; the pulse is increased from about ten to twenty beats—all of which suggests an increase of blood supply to the active part. The patient usually experiences less pain and more freedom in movement after the application of the heat, which may be due to the anæsthetic effect of the heat on the nerve supply of the joint. Experimentally, the physiological effect of such heat has been shown to be increased arterial tension, the elevation of blood pressure, dilatation of the blood vessels, diminution of the erythrocytes, decrease of hæmoglobin, increase in the elimination of nitrogen, and increase in the frequency of the heart's action.

The beneficial action of the heat cannot be explained on any constitutional effect where there is a diathesis, but we must consider the result as due to the local influence; and he questions the advisability of this form of treatment to any acute conditions, which are due to any form of infection, or to a diathesis; and particularly may this question be raised in those cases of rheumatic origin in which we theoretically would not wish to decrease the amount of nitrogen eliminated, or for the acute conditions of joints due to some specific form of inflammation, as for instance, tubercular, in which the advisability of increasing the hyperæmia would be questionable. Excluding these cases, there is left only those of traumatic origin, and it is in these that this form of treatment has proved most useful. For in this condition, after a joint has been restored to its normal activity, there is no danger of inflammation from any latent diathesis or germ. This does not, however, apply to joints (tubercular, for instance) which have been healed, in which there remains only the result of the previous inflammation.

The details of treatment in twenty-five cases are given, with the results, both beneficial and negative.

The physiological effect of the local application of hot air on general metabolism is considered separately, and the results by different observers are quoted. Experiments were made by the author upon the patients with the same end in view, and in general coincide with the results of other observers, except in regard to the elimination of nitrogen, the results in his experiments rather pointing to the decreased elimination by the treatment.

Dr. Frazier gives the following conclusions of the physiological effects of hot air: (1) temporarily increased circulation, respiration and fever; (2) moderate fungacious local anæsthesia; (3) loss of weight, probably due to loss of water from the skin and lungs; (4) a decreased nitrogenous output; (5) the effects of hot air baths are purely local in origin.

The attention of our readers is called to the advertisement of Robinson-Petter Company, which appears on page 12, of the issue.

This house is one of long standing, and enjoys a reputation of the highest character.

The preparations referred to, we commend specially to the notice of Practitioners.

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Infantile Paralysis.

In a clinical lecture recently delivered at the Queen's Square Hospital, London, Dr. Buzzard related several cases illustrating the infective origin of infantile paralysis. (The Hospital, April 2, 1898) The matter is one of very great interest; for, as Dr. Buzzard says, infantile paralysis is a peculiarly cruel disease. It rarely has the mercy to kill the patient, but usually condemns its victims to a prolonged existence embittered by more or less helplessness and deformity. Moreover, our present means of dealing with this disease, when once produced, are so trifling as scarcely to deserve serious mention.

The preliminary fever which precedes the paralysis is well known; but the suggestion is made that this is not so much a first stage as an independent disease, and that it is by dint of some destructive toxin, elaborated during this fever, or by its specific (microbic?) cause, that the paralysis is produced, much as post-diphtheritic paralysis is caused by the toxins elaborated in diphtheria. Several small "epidemics" of infantile paralysis are referred to, and it is pointed out that alongside of those cases in which febrile attacks ended in typical paralysis, other cases occurred in which febrile attacks of apparently the same character passed away without producing this disastrous result. It is very desirable then, that, whenever a case of infantile paralysis is met with, the character of any febrile ailments occurring in the same locality and about the same time should be carefully studied; for if it should be possible to discover and differentiate a specific infectious fever as the necessary antecedent of infantile paralysis, one might indulge the hope that science might be able to introduce some effective method of combating the toxic agent before it has produced those crippling results which, when they have once been set up, are so little amenable to treatment.

Announcement.

PHILADELPHIA, June 30, 1898.

The partnership hitherto existing between Presley Blakiston and Kenneth M. Blakiston, under the firm name of P. Blakiston, Son & Co., expired June 30, 1898, on account of the death of the senior member.

The busIness of publishing, importing, and dealing in Medical and Scientific Books, as established in 1843, will be continued by Kenneth M. Blakiston, trading as P. Blakiston's Son & Co.

Prompt payment of all outstanding accounts is requested in order to facilitate the settlement necessary to this change.

The Operative Treatment of Irreducible Subcutaneous Fractures.

Ransohoff in an article on this subject believes that in certain cases an interference before union had resulted would be preferable to the certainty of deformity, and reports seven cases which have come under his observation in which the fracture was exposed and directly treated. (Boston Medical and Surgical Journal.)

The author states that his experience or what he has gleaned from literature does not warrant him in coming to conclusions that are final. Nevertheless, he believes that it would be justifiable to submit in a tentative way the following postulates:

1. The conversion of a simple fracture is justifiable when other means to secure the best end results fail.

2. In fractures of the diaphysis of the tibia, femur, humerus, and clavicle in which insurmountable longitudinal displacement or axial rotation has taken place immediate operation or mediate operation before definite union has occurred is indicated.

3. In epiphyseal separations, when reduction cannot be otherwise effected, an early operation is justifiable.

4. Fractures complicated with dislocations irreducible by other methods warrant operative interference.

5. The involvement of a joint, except probably in the case of knee and hip, do not, *per se*, militate against operation if this is otherwise indicated.

6. If extensive comminution is present, as in compression or crushed fracture, operation is contraindicated.

7. Special precautions against infection must be taken, in connection with which should be borne in mind the dangers of too firmly closing a wound and the advantage of temporary tamponade and secondary suture.

8. Reckless and indiscriminate resort to the operative relief of deformity in recent simple fractures is to be condemned, since there would be few fields of surgery, in the event of an unsuccessful intervention, in which the contrast could be greater between the good intended and the harm done.

BIDDEFORD, ME. June 25th, 1898.

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Gentlemen:—Am using Glyco-Thymoline (Kress) in my family, and daily prescribe same for Rectal diseases as well as for Nasal Catarrh and inflammations with excellent results. Will extend its use to diseases of mucous surfaces in general.

Yours truly,

H. RENY, M. D.

Aseptolin---Edson.

It is necessary to say a few words on the length of time required in the Aseptolin treatment. This, of course, varies greatly in the different diseases. In septic cases the temperature is often reduced to normal within 24 hours, but the subsequent treatment depends on the time necessary to cure or remove the cause of septic absorption. In cases of la grippe no patient has yet been treated more than three days without a complete recovery. The treatment in malaria usually takes twenty-eight days to complete.

The time necessary in cases of laryngeal tuberculosis varies enormously. There have been cases of the disease in an acute form which were discharged cured in ninety days, while others may remain under treatment eight or nine months or longer. The fact of the matter is that phthisis is a difficult enemy to drive out of its entrenchment, and a long and hard fight is before the physician who attempts this. The usual effect of the Aseptolin, the ether and iodoform spray and the phenol inhalations may be not unfairly described as follows:

During the first week improvement is usually noted in the night sweats, which become less, even if they do not cease, and in the tubercular diarrhœa, which disappears, if it has been present as a symptom. The patient becomes buoyant and hopeful in spirit. The appetite increases and the sleep is better. Often the cough and expectoration increases considerably. During the second week all improvements noted in the first is more apparent. The night sweats cease, the appetite is often ravenous and the sleep is very much better. During this week the cough and expectorations diminish greatly. The buoyancy and good spirits of the patient increaces also. In the third week the improvement continues, and the patient generally declares there is a great feeling of strength. In this week the increase of weight is usually noted. During the fourth week, unless there be nausea, the patient holds the gain made so far. Should nausea appear, or albumen in the urine, both being rare complications, the treatment must be suspended for a few days, and there is a slight falling off. Often in this week the patient complains of great soreness in the fleld of injection from the effects of the needle. This may be avoided by changing the site of the injection.

After the first month no one week will show the improvement noted during any of the first four. There will be, however, a steady if slow gain, to be measured by months rather than weeks, and this may be looked for until the patient is discharged cured.

From the foregoing reports from a number of observers on their cases, from the diversity of the cases themselves, and from the results, favorable or otherwise, even conservative physicians will grant these conclusions:

First. That in treatment of malaria and LaGrippe, Aseptolin is a specific.

Second. That in cases of tubercular disease, the Aseptolin treatment is not only rational in theory and practice, but that the results show a larger per cent. of cures and a more uniform improvement in the condition of the patients than can be credited to any other treatment at present known.

Aseptolin is not a specific of consumption in any sense of the word. It affords a scientific method of fighting the disease, because it is an advance along the line indicated by nature herself, and because it is an application to the germs within the body of an agent long applied for the destruction of these, when cultivated or produced in our laboratories. Furthermore, identical results follow in both cases: the growth and the development of the germs inhibited.

Dr. Edson says: "my experience with Aseptolin in the treatment of malaria leads me to consider it a specifie and of even greater efficiency than quinine.

"I have personally treated many cases of this disease. In the great majority of which the mode of administration was as follows:

"On the first day of the treatment 200 minims were injected as an initial dose. This was delivered into the abdominal parieties in two injections of 100 each, on either side of the median line, the point of the needle being directed away from it. On the second day and each day following, until and including the 7th day of the treatment, 100 minims were given (injected into the abdominal parieties in different places, first on one side of the median line and then on the other.) Then, on every alternate day, for three alternate days, 100 minims were given in a like manner. On the twenty-first day a dose of 100 minims was administered, and finally the treatment was concluded with an injection of 100 minims on the 28th day. Latterly I have given 200 minims on the 28th day as a final dose.

"In not a single case has there been any recurrence of the malarial paroxysm after the first injection of 200 minims nor have any of my cases had a crudescence or a recurrence of the attack. The patients appear well in every way within a few hours of the injection. The medicine appears to act equally well when given during paroxym

or during the intermittent." Dr. John H. Ripley, of New York City, used the solution in two cases of malaria, which he describes as follows:

"The first was a complicated one, but the malaria factor seemed to yield readily. The second was a very chronic malarial poisoning in a very young girl. Her case was treated according to your plan carried out to the letter (described in the foregoing.) She came from Brooklyn and remained in New York so as to get the full benefit of the treatment. The disease yielded by degrees. After one week she appeared well, but a relapse occurred a week after the treatment was discontinued. I then sent her to a non-malarious country place in Conneticut. where she has since remained well. This was a very obstinate case of recurring malaria with only temporary relief.

Cancer of the Breast.

Dr. W. L. Rodma states that the results of Keen, Bull, Dennis, Weir, Halstead, and Powers, six American surgeons, who have within the year published their statistics in operations for cancer of the breast, show a mortality of less than 1 per cent. (six hundred and fifty-six operations and six deaths.) He concludes his paper with the following conclusions:—

1. All mammary growths should be removed at once, for innocent tumors, carried for a long time, become a menace.

2. The complete operation should always be done in cases of malignant disease.

3. In nearly every case it is simply impossible to detect enlarged glands until the axilla is opened. Keen says that he cannot do so once in ten times.

4. The mortality should be, with average operations, about 3 per cent.

5. A radical operation should promise from 25 to 50 per cent. of permanent cures, according to the time when the patients apply.

6. When in doubt operate; never wait for symptoms.

S. Norwalk, Conn., June 9th, 1898.
Kress & Owen Company,
New York, City:

Gentlemen:—I have employed your Glyco Thymoline in cases of Hemorrhoids, as well as in Gynecological cases, and always with desired effect.

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Prof. of diseases of children in Woman's Homeopathic Medical College, and resident physician in Home Rest.

Notice to the Drug Trade.

We desire to announce to the Retail Druggists of the United States that we will pay the stamp tax ourselves, and will not raise the price of Peacock's Bromides and Chionia. We do this to prevent the burden of the tax from falling upon the retail druggist. In return for this concession, we solicit the good will and moral support of the druggists, and hope for their assistance in preventing substitution. Peacock's Bromides and Chionia are sold at $8.00 per dozen; $1.00 per Bottle. They are kept in stock by all wholesale druggists, to whom all orders for less than gross lots should be sent. Peacock Chemical Co.,
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N. B.—All goods in the hands of the trade when law goes into effect are to be stamped when sold at retail. This expense the retailer will have to stand, but it will be only temporary.

Very seldom do I say anything for a preparation that might be used as a testimonal, but I feel that I have sufficiently tried Unguentine to lend a word of encouragement to its varied uses. I used it almost exclusively in a case of severe conjunctivitis, due to strong caustic Silver Nitrate with the most gratifying results. The severe pain ceased almost instantly, the severe burning subsided and the lachrymal fluid checked. Patient comfortable in twenty minutes and slept soundly for the night. We never had any more swelling or further alarm. I have treated another case of Conjunctivitis, with similar results, that was brought about by Chrysophranic Acid, used for a ringworm. We use Unguentine exclusively in our family for all sores, bruises, diseases of the skin (including parastitic troubles) and mucous membranes, such as haemorrhoids, etc. We have equally as good results in general practice. I treat all my cases of operative haemorrhoids with Unguentine, successfully. Endomitritis is treated handsomely by filling six grain capsules with Unguentine and putting two or three of them as far in the urine canal towards the fundus as possible with suitable forceps and adjusters. The results have been fine with all I have treated so far.

Unguentine is the fat man's friend. I speak from personal experience. It has no superior for chafes. It is worth its weight in gold for this alone, to fat folks. The so called "Tetter" in the hands of our fishermen and watermen has no show for existence when Unguentine is applied freely twice a day.

I am, Very respectfully,
F. P. Gates.

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Diuretic Treatment of Renal Dropsy.

Dr. Nestor Tirard (British Medical Journal), in a lecture on this subject, states:—"It may be well to remind you that Manquat classified diuretics as follows:—1. Mechanical diuretics, with the sub-divisions (*a*) cardio-vascular diuretics, (*b*) aqueous diuretics. 2. Renal diuretics, sub-dividing into (*a*) functional epithelial diuretics, (*b*) irritant epithelial diuretics. You will see from this classification that digitalis and diuretin, salicylate of theobromine and sodium, probably belong to different groups. Digitalis stands as a 'cardio-vascular diuretic,, which will act partly by increasing the blood pressure generally, and partly by increasing the speed of the flow of blood through the glomeruli; in fact, digitalis is to be grouped together with convallaria, squills, ergot, strophantus, and caffeine. Of the 'aqueous diuretics' in the above classification, we made use both of Imperial drink and of milk; and these act by increasing the volume of the blood, and by thus directly raising the arterial tension. All classifications of remedies are necessarily imperfect. Some of the 'aqueous diuretics,' notably milk, might with equal propriety fall into the second group of 'renal diuretics, which act directly on the renal epithelium. Huchard has grouped together the indications for diuretic medication, as set forth by various authors, in the following way:—1. To maintain the action of the kidney; 2, to evacuate fluid effusions; 3, to soothe and diminish irritation of the genito-urinary organs; 4, to modify the urinary excretion, to prevent urinary calculi; 5, to exert a derivative action through the renal passages; 6, to hasten elimination of toxic substances from the organism; 7, to free the blood of morbid matters which are capable of elimination by the kidneys. With cases of acute dropsy, such as occur subsequently to scarlet fever, you well know that our practice is to stimulate the action of the skin so far as possible by the employment of diaphoretics, or by using the hot-air bath or the wet pack; and while we endeavour in this way to relieve strain upon the engorged vessels of the glomeruli, we almost, as a matter of routine, administer hydragogue purgatives, by means of which we hope, by reducing the volume of blood within the vessels lining the intestine, to exert an absorbent action through the vessels of the remoter tissues. There are few facts in medicine which appear to be more conclusively proved than that the total quantity of fluid circulating within the blood-vessels always tends to remain the same, so that when the vessels are depleted at one part of the body the loss is replaced by absorption from other parts."

The American Academy of Medicine.

At the annual meeting of this society, held in Denver on June 6th, under the presidency of Dr. L. Duncan Bulkley, of New York, the following officers were elected for the coming year: President, Dr. Edward Jackson, Denver; First Vice-President, Dr. W. L. Estes, South Bethlehem, Pa., Second Vice-President, Dr. J. T. Searcey, Tuscaloosa, Ala.; Third Vice-President, Dr. William Elmer, Trenton, N. J.; Fourth Vice-President, Dr. Robert Babcock, Chicago; Secretary and Treasurer, Dr. Charles McIntyre, Easton, Pa.; Assistant Secretary, Dr. W. L. Pyle, Philadelphia.

A company has been organized to furnish cheap hot water to the poor of London, by utilizing the waste heat of the street gas lamps. The hot water may be drawn off by placing a halfpenny in a slot and turning a valve. It is proposed to extend the scheme so that eventually the man in the street may provide himself with a cup of tea, coffee, cocoa, or even beef extract.

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Dyspepsia in Children.

Dr. Magniaux says that dyspepsia is very common in childhood, but is frequently overlooked, its victims being treated for anæmia, beginning tuberculosis, &c. In consequence, iron, creosote, quinine, and wine, all which are irritants of the mucous membrane of the stomach, are given often with unpleasant results. The author, having examined eleven children presenting the symptoms of dyspepsia, draws the following conclusions: all were badly nourished during the first years of life; eight were bottle-fed; three were allowed a mixed milk diet; and all were rachitic to a variable degree.

A dyspeptic child may be abnormally thin, or large and fat, the two types representing only two successive stages of dyspepsia. In all of these cases the stomach resonance extended down to, or even below, the umbilicus. There was always excessive thirst, and usually loss of appetite, though in two of the children the appetite was abnormally great. Constipation was frequent, often alternating with diarrhœa. Nausea, vomiting, and heart-burn were frequently observed. At times the gastralgia was so marked that it might easily be thought to be due to ulcer of the stomach. Headache and night terrors were common.

Hydrochloric acid was usually found to be in excess, although it was entirely absent in certain cases, and at times it was normal in amount. As a general rule, alteration in the gastric juice played a secondary part, while muscular atony was the most important feature of the disease.

Treatment was for the most part dietetic. Medicines were prescribed in only four of the eleven cases, and consisted of bicarbonate of soda, powdered nux vomica, and hydrochloric acid. In all cases the treatment employed had but one object, that of permitting the overworked stomach to rest as much as possible. This was accomplished by reducing the number of meals, by establishing their regularity, their character, the fine division of the food, and the regulation of the amount of liquid. The results obtained were very satisfactory.

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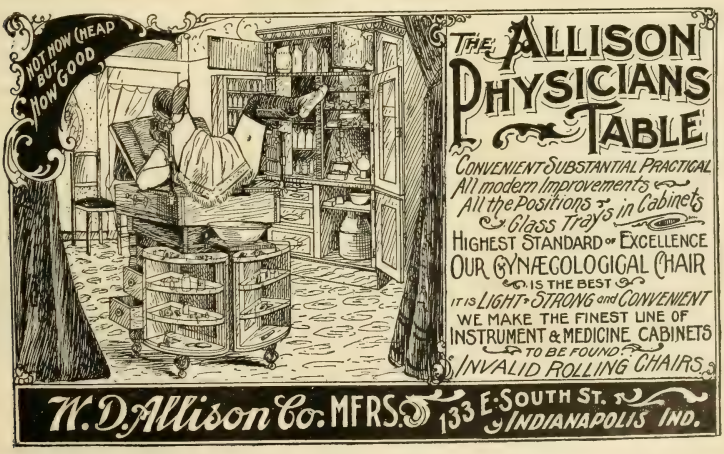
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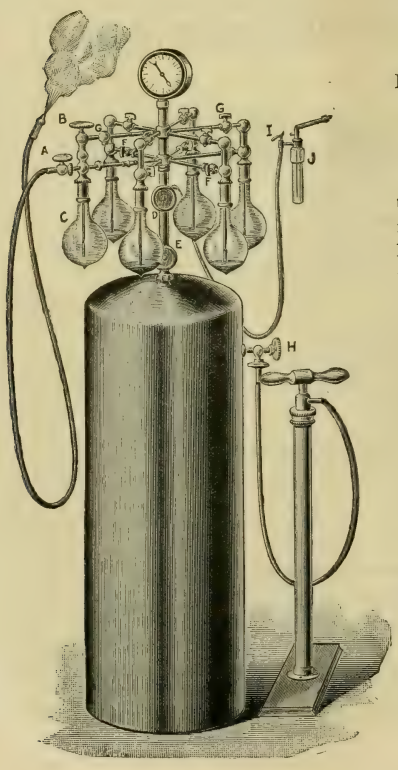

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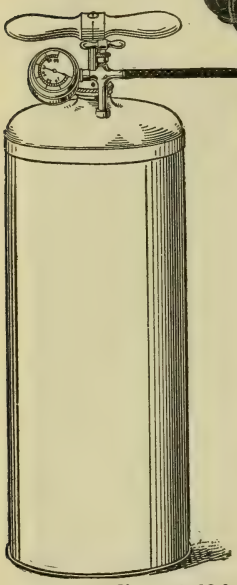

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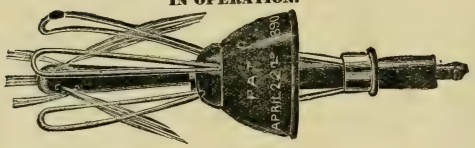

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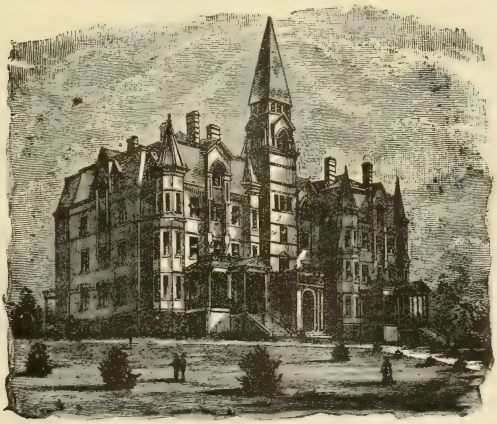

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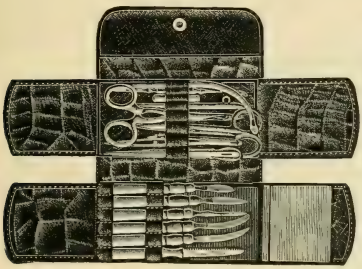

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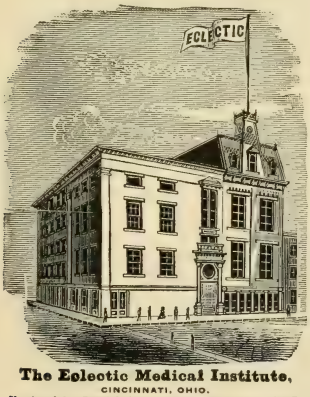

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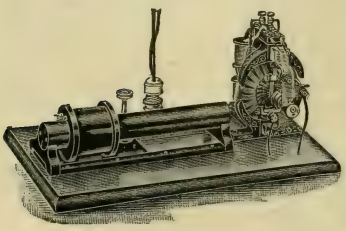

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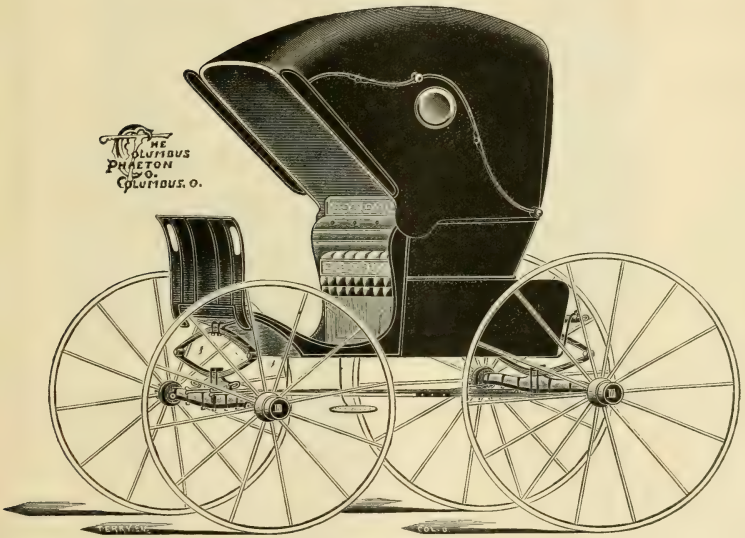

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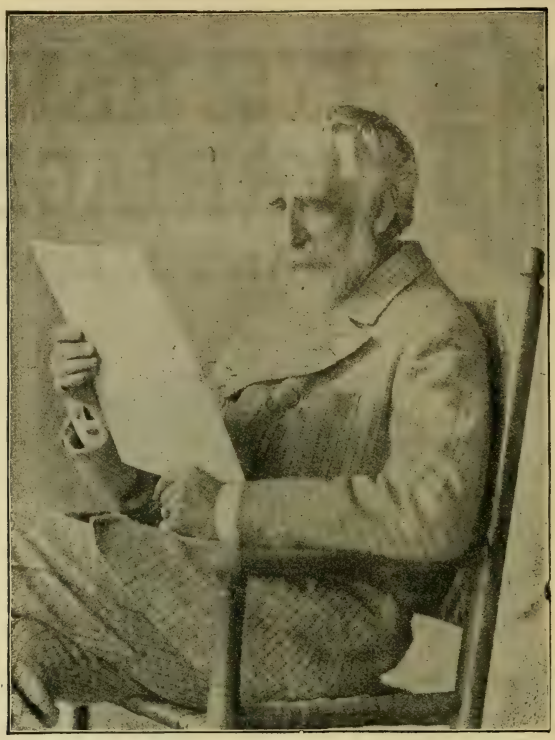

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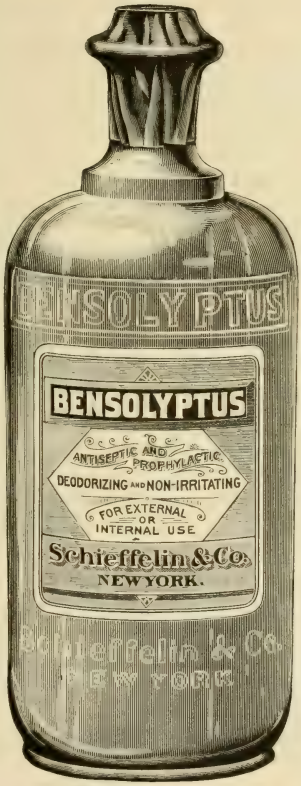

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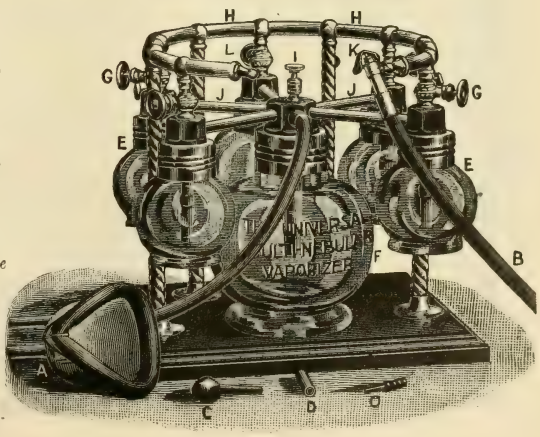

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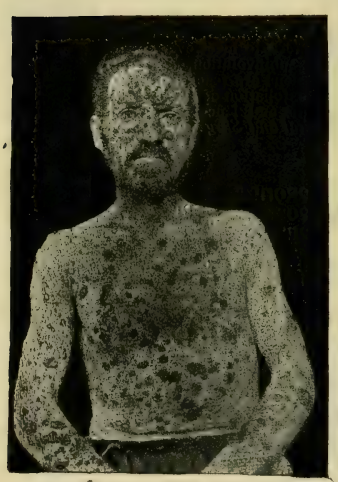

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Fig. XVII—Dorsal Position.

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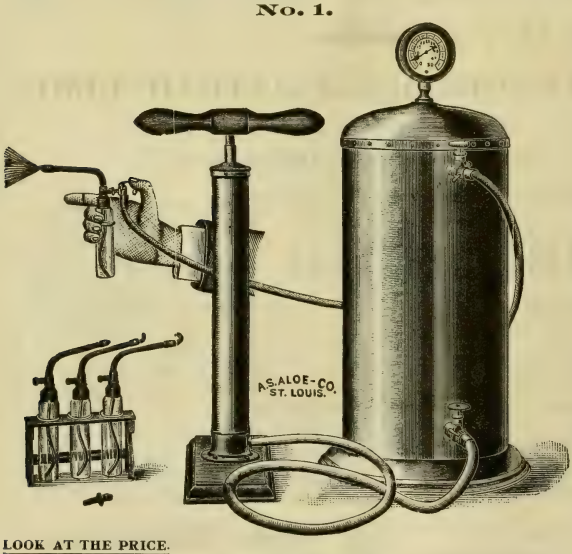

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The Charlotte Medical Journal.

Vol. XIII. CHARLOTTE, N. C., AUGUST, 1898. No. 2.

Inheritance.*

By William Matthews Ogle, Ph.B, M. S., M. D., Delaware City, Delaware.

In writing again on heredity to this Society, after an interval of a year and as before at the request of Dr. Tomlinson, our then Secretary and now President, I shrink from the appearance of forwardness which a second paper may seem to give to observations which have the simple purpose of contributing my mite toward making the present spirit of the Medical Society of Delaware, what we would have it. On the other hand, I have no desire to escape the imputation of a deep interest in the subject and of a belief that a brief paper would give rise to a discussion at a meeting of the Society, that would be of especial interest, confident that many of the members of the Society can relate incidents from personal observation that would be instructive and stimulate our interest in the subject. Believing, I say, that every physician who lives with his eyes open, has opportunities to corroborate testimony given and to aid in establishing facts in heredity.

The fundamental law of heredity, "Like begets like," that is, the offspring shall conform to the recognized type of the class to which it belongs, is more exact in the plant creation than in the animal world. The seedling plant has every characteristic of the parent. Our first thought would be, this is to be the more expected as most plants are bisexual and, therefore, the parent stock is a single individual. Although the winds and insects carry pollen from one blossom to another, yet the plant is mainly self-fertilized. Some of our most delicious fruits, Bubach strawberry, Kieffer pear, et al., are from plants that produce sexually imperfect blossoms and must be fertilized by pollen from another plant and from the seedlings from these there is little variety, and the fact remains, that there is a remarkable sameness among all plants of each individual species. This sameness is carried to almost as great an extent in birds and in the lower animals as in plant life, and we distinguish the young from the parent by the difference in age only, or indeed in size.

Among our domestic animals we are frequently surprised not only by the close resemblance of the young to its parent, but by the recognition of certain peculiar characteristics which have been transmitted from parent to offspring with remarkable fidelity. Several years ago, the writer disposed of a thoroughbred mare to the owner of a stockfarm, since which time she has furnished her owner several fine colts and by different horses. Although some of her offspring differ from her in size and color, in many respects there is a strong resemblance which is so marked that any one who remembers the mare when a carriage horse will readily recognise the young horses as her progeny.

A condition that is to be considered with —if not in—the doctrine of heredity is what is called, evolution *per saltum*, or with a jump. It is that process, whatever it may be, which produces "sports" in plants, and "cranks" and men of genius, in respectable families. Botanists have studied the production of sports with the utmost care, but in vain so far as the law of their origin is concerned, it remains as obscure as ever. And they are equally as obscure in the human race. Who can explain Gœthe's inspiration? He certainly bears no resemblance to his bourgeois father or garrulous mother. Can the doctrine of reversion explain these prodigies or monsters as they happen to be? [1]Sometimes it is very difficult to trace this or that particular characteristic of the child to either of the parents. This may be due to the combined influence of both parents upon the child, since a compound of two unlike elements must necessarily differ from either of the elements. The offspring of two markedly different parents, if it is strongly individualized cannot resemble either. If the two parents are too greatly unlike in organization or descent the offspring may be an infertile hybrid.

[2]M. Anatale Leroy-Beaulieu in his very valuable work, "Israel among the Nations," calls attention to the extraordinary power of the Jewish type to survive and dominate in a mixed race and to the fact that a single instance of a marriage with a Jewess will be sufficient to perpetuate it in a family for many generations. Leroy-Beaulieu says: "In this fact the Jews possess an element of stability which is wholly independent of

*Read by title before the Medical Society of Delaware, at Wilmington, June 14th, 1898.

all considerations of creed and ritual." We see distinctive characteristics—mental as well as bodily ones—of isolated peoples, as the Gypsies, the Chinese and others transmitted through entire nations for thousands of years. But the Jews are not an isolated people. Having no country to call their own, they remain a separate nation through these inherited characteristics. This persistent inheritance of peculiarities can not be the result of chance, it is altogether too general for that.

To preserve itself or the continuation of its species an animal by a natural impulse is impelled to do certain things, independently of instruction and experience. This we call *instinct*. But what is instinct other than a striking exhibition of persistent inheritance? [1]Birds, beavers, bees, etc., build their habitations as birds, beavers and bees built theirs thousands of years ago. The habits, modes of living, methods of attacking their enemies, or of self-defence, etc., remain forever the same in the same species of animal.

Here in Delaware, where low marsh land is so prevalent and extensive, it is not unusual to see huts built on the marsh with negro occupants, who live there in comparative good health, immune from the miasmatic conditions that prevail. A white man, under such circumstances, would suffer severely and probably die in the county hospital from malarial poisoning and over medication. It may be that the negro is subject to sunstroke, but the writer has never known of a case. Apropos: On going to look after a negro at work in the garden, he was found flat on his back, hat out of sight, sleeping comfortably. The writer was sure that the negro was sober and healthy, and that he slept nine to ten hours every night. A thermometer in the same place quickly registered 120 degrees. Such exposure would have been disastrous to the skin of the exposed parts of a white man, if more serious results had not occurred. The negro suffered no more discomfort than if his sleep had been on a couch on a well shaded piazza.

Previous to one or two hundred years ago, for thousands of years, the ancestors of the negro lived in a climate that was hot and moist, and hence his immunity is an inheritance.

At the outbreak of the present war, the papers teemed with the anxiety of the National Administration to secure "immunes" for an "army of occupation," to be sent to Cuba, and it is the general belief that of those who are now going, more will die from the effects of the climate that from Spanish bullets. While the facts of the negro's immunity are so well established, it is strange that he has been so completely ignored in the making up of this new army for which he is so well adapted—we can spare him from his usual haunts as they would spare the rabbit from Australia, and his place would be almost as speedily filled.

[3]The eminent writer, Dr. Claudius Henry Mastin of Mobile, relates some personal facts that bear directly on this doctrine of inherited immunity: "My father, in his early manhood, had small-pox as the result of inoculation—in those days, such being the preventive measure. I have been vaccinated MANY TIMES with negative results; it has never taken (to use the common expression) and in the course of my professional life, I have passed through several severe epidemics of small-pox, have attended in small-pox hospitals, have slept in the room with one case of severe confluent small-pox, and have never taken the disease! In fact, I have been unusually unnecessarily exposed to its contagious effects.

"Again, my uncle, the late Dr. Henry S. Levert of this city, was similarly exempt; his mother, the mother of my mother, and consequently my maternal grandmother, had small-pox in her early womanhood, as the result of inoculation. Soon after Dr. Levert's graduation, at the University of Pennsylvania in 1829, he was elected resident physician at the Philadelphia almshouse (now Blockley). Then there were frequent cases of small-pox admitted to the almshouse and afterwards removed to 'Bush Hill.' An epidemic of that disease made its appearance in Philadelphia, and Dr. Levert was chosen as one of the attending physicians to the small-pox hospital. He accepted the position and took up his residence in the house. He remained there until after the subsidence of the disease, was with it day and night, handled the patients and was careless of himself in every particular. He was repeatedly vaccinated both in infancy and afterwards in mature years, and *always with negative results.*

"Now the question, *am I immune by virtue of a hereditary protection* derived, first from my father and more remotely from my grandmother? Dr. Levert was undoubtedly immune, as certainly he never contracted small-pox or received the protection of vaccination, and hence stands, alike with myself, proof against the disease small-pox.

"Is it possible that this may be a coincidence, where two members of the family fail to contract one of the most contagious of diseases, when both of them have been unusually exposed to the disease? Or is it

a proof of the fact that heredity can protect against the invasion of disease in the same way or by the same law which regulates the transmission of constitutional disorders."

"Coincidence" in this case is about as satisfactory as the clergyman's "dispensation of Providence" in accounting for the common misfortunes of life.

To the writer's thinking, the proposition Dr. Mastin offers in his last interrogation covers the situation conclusively.

We know very well that immunity from small-pox in an individual is acquired by an actual combat with the infectious cause of small-pox. The inference must follow therefore, that the people who escape the zymotic diseases, by reason of personal immunity or by reason of a successful vital or physical resistance to the germs, do so not because they have failed to encounter the germs or failed to inherit them, but because they have inherited the physical resistance from ancestors who acquired the same by reason of having had the disease.

[5]Tizzoni and Cantani have shown, experimentally, that in rabbits artificial immunity from rabies may be transmitted from the father to the offspring. They experimented upon the young of three litters. The male had been strongly immunized against rabies, while the mother could be considered normal in regard to rabies, although she had been immunized against tetanus. The young were inoculated at ages varying from 46 to 77 days with the rabic virus of the street, introduced within the dura mater. Invariably, these rabbits that had been inoculated with street rabies did not contract the disease; others, however, which were inoculated with the most virulent form became ill and died, but much later than control animals.

They (Tizzoni and Cantani) believe, therefore, that they have, beyond a doubt, proven the possibility of a hereditary transmission of immunity through the germinal plasma.

Another element for speculation, the notion of the Occulists or Esoteric Buddhists, termed the "Law of Karma," needs a little explication in order that we may consider its bearing on heredity. The notion is that all human beings in this world undergo successive incarnations, preserving unconsciously their personal identity in all the changes of condition. Therefore every human being is the result of all the influences in all his previous conditions, that is, he is not the result of ancestral influences imposed upon him by descent, but of conditions in his former incarnations. The form in which he shall reappear in the world is not determined by his visible ancestors, but by his conduct in his former lives. He may have been born into wealth or into poverty; in those days, he may have been an African savage or a Roman dandy, a king or a beggar, or eveu a woman. But whatever he was, now in this present incarnation, he suffers the penalty of all his misdeeds in all former states of being, or he enjoys the reward of good conduct in any of them. And it behooves him now to live the higher life—perhaps of expiation—in order that he may rise into a still higher life in the next unknown incarnation, and not sink into a lower. Therefore no effort is thrown away, and no act is without its infiuite personal consequences. The Law of Karma, it is explained, is the law of the conservation of energy on the moral and spiritual planes of nature. If we understand the position, a man, as to what is most important in his incarnations does not take from his physical ancestors, he only inherits from himself. What he was in his former states, he can not know except by observing what he himself is now. In this way the responsibility is shifted from our grandfathers to ourselves.

That heredity has become one of the fads of the day is much to be deplored. We naturally expect to see the advancements of science reflected in the trifling conversations (are not Edison and his inventions household words?) and lighter literature of the day, and we find scores who will readily give positive opinions where a Galton or Weissman would hesitate, and this also is to be expected. But our novelists and dramatists ever on the lookout for new things, so that novelty may attract, push to an extremity the theories of scientists in a manner never dreamed of by the men who originated them. There is never any mitigation of the inheritance in fiction when an innocent soul is to suffer. The smattering of scientific knowledge displayed in many of these novels has a tremendous effect on certain sensitive souls, and life is saddened for them by the irresponsible vagaries of some writer who is seeking a dramatic situation with scientific accessories.

[4]"Why bowest thou, O soul of mine,
Crushed by ancestral sin?
Thou hast a noble heritage
That bids thee victory win.

[NOTE.—The above quotation is an extract from a private letter received from Dr. Mastin in March, 1898, which I requested the doctor to allow me to use in this (then intended) paper. In reply, Dr. Mastin reminded me that it was not written with any thought of its publication, and suggested my taking the facts "clothed in better language," and as it would be difficult to improve on the doctor's nicety of expression, I give the extract verbatim.—W. M. O.]

The tainted past may bring forth flowers,
As blossomed Aaron's rod,
No legacy of sin annuls
Heredity from God."

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Neurasthenia--A Case Illustrative.

By J. L. Tracy, M. D., Toledo, Ohio.

The following case is not an imaginary one, but is one under treatment at the present time. It may look as if the case is reported to show what ordeals the patient has been spared from passing through, by having fallen into the hands of the present medical adviser, and since it would be very natural for the writer to disclaim any such motive, it is as well to let the denial pass unmade.

The claim is made though, and the writer thinks the case reported proves as much as one case can prove, that many operations are made for the relief of distressing conditions, which distressing conditions were not dependent upon the abnormality which the operation was intended to relieve.

That the case reported is not unique every physician will, from having met many such cases know, and he will know too that when recovery comes, if it ever does fully come, it will be after many discouragements on the part of the patient, and much study on the part of the physician who treats her. The case is as follows:

Mrs. ——, aged 40, is a small woman, weighs 120 pounds, is only moderately well nourished, has light brown hair, and fair complexion. She very perfectly typifies that physical makeup which is called the nervous temperament. Soon after the birth of her youngest child, now sixteen years old, her husband died. She married again four years afterwards, but has not been pregnant since second marriage.

She has done a good deal of mental work in connection with women's organizations, and has enjoyed the stimulation of the responsibilities which attend the prominent positions in those organizations.

When fifteen years old she began to have attacks of vesical tenesmus. This trouble has continued at varying intervals ever since, and for a good many years she has at night been obliged to arise one or more times to urinate. Two years after the birth of her youngest child she had the perineum restored.

She has been told that she has a prolapsed uterus, and a lacerated cervix. This diagnosis was made by good men and is doubtless correct. There seems never to have been anything very abnormal with the menstrual function, but at those times all distressing conditions are intensified, and there is pain upon pressure in the inguinal regions.

She has internal and external hemorrhoids which often become so inflamed as to confine her to her bed. The hemorrhoids developed during last pregnancy. The bowels are always obstinately constipated, requiring the constant use of enemas or cathartics.

She has fermentative dyspepsia; great quantities of gas being eructated. The gas is without odor, though at some times the breath has a penetrating musty odor, being noticable over entire house.

The mother of this patient died of some stomach trouble which had symptoms similar to patient's. The patient has had this stomach trouble for twenty years. At a sanitarium in Michigan a dilated stomach was diagnosed. She was treated by lavage, and ate at the diet table for several weeks without material improvement. She was taught to use the stomach tube, and she has frequently resorted to it since then.

Later, at the same sanitarium, a floating kidney was made out, but an operation for its anchorage was not made.

She has the intestinal trouble known as mucous enteritis. A quart or more of mucous casts and shreds have frequently passed the bowels upon the relief of a particularly obstinate constipation.

Irregular action of the heart is apt to be induced by going up stairs, unconsciousness lasting from one to ten minutes being caused. Following the unconsciousness is a confused state which will not entirely leave for several hours.

Now, in the organs of this woman are reasons enough to justify the making of a half dozen formidable operations, but she will recover as quickly without the operations as she would with them, and when she has recovered without the operations she will be much better physically than she would be with the same degree of recovery after the operations.

The fact is that very many symptoms which are usually said to be caused, by a floating kidney for instance, have, as in this case, a deeper meaning; and the same statement is true regarding ovarian irritation, lacerated cervix, prolapsus of uterus, hemorrhoids, etc.

Influenza, or any other acute disease, is

likely to reveal weak places in the body. Neurasthenia does the same thing.

A sequel of influenza may persist for a long time; a complication of neurasthenia may last as long as the neurasthenia does.

In the majority of the cases where nervous symptoms disappear after an operation upon some organ, in neurasthenic cases, the moral effect of the operation upon the patient, the enforced rest with accompanying freedom from care, and the augmented sympathy that the ordeal of the operation has excited among the friends, and which is manifested by unusual tokens of esteem, these accidents of the operation, are greater factors in restoration to health than was the operation itself.

These accidents of the operation may, of course, be created and their aid invoked without having had to resort to the operation, and they are equally as effective. What not to give in the way of medication is as important as what to give. No other class of patients require the exercise of better judgment and more study.

Galvanism, of all single measures, properly applied, probably stands first in its range of usefulness.

306 West Woodruff Ave.

Tetanus of the Uterus.

By F. R. MILLARD, M.D., San Diego, Cal.

The June number of the American Journal of the Medical Sciences notices a fatal case of tetanus of the uterus which is abstracted from a German Periodical, and in his comment on it the editor impartially distributes the blame for the woman's death on the midwife who first had the case, the medical man who was called to her aid and the gynæcologist whom he called to his assistance, and says each one of them contributed to the woman's death. He does not say in so many words that the obstacle to delivery after the craniotomy was the contractionof the pelvis, but one is justified in inferring that such is his belief. On the other hand one cannot read the abstract without having a strong suspicion that the trouble was the tetanic condition of the uterus. Surely a pelvic conjugate of nine and three-fourths centimeters should permit delivery after craniotomy if there were no other obstacle. It is very probable that chloroform was too long relied on to overcome the condition (one hour and one-half.) In the vast majority of such cases it will cause at least temporary relaxation of the spasm. In a small minority it will not, and if the editor had ever treated one of this minority, perhaps he would not have distributed censure with quite so liberal a hand. During the first year or two of my practice very few of my parturient patients would consent to inhale chloroform but at the end of a dozen years the ratio was reversed, and the rule was, they were more anxious to get it than I was to give it. So my experience with chloroform has not been small.

I was then called to a woman who had been in labor sixteen hours under the care of a very wise old midwife, who had attended her in five or six previous labors. This was the ninth and all had been quick and normal. She had always been strong and healthy and had no surplus adipose tissue. It has been said that the midwife was a very wise woman. She knew enough not to try to make a vaginal examination, and also not to give ergot, and this knowledge ordinarily made her a very safe attendant. At the first glance it was my impression that the woman was ergotized, but both she and the midwife declared that none had been used. An external examination permitted the diagnosis that the head was entering in the first position. A vaginal examination confirmed it, and also showed that there was no obstruction there. Chloroform was given and as soon as her cries and restlessness were quieted I directed my attention to getting a history of the case. The midwife was called about midnight and until about 11 o'clock the pains were infrequent. They then increased in frequency and force and between 12 and 1 o'clock the waters broke and since that there had been one continuous pain without any relaxation. So far I had not observed any. A careful examination showed that the fœtal heart still acted which proved the midwife mistaken in saying there had been no relaxation, for the heart could not have continued acting for three or four hours under such compression as then existed. The outlook was not pleasant. The nearest reliable assistance was twenty-five miles away and it looked as if I must manage a case of uterine tetanus without professional help. Through the vagina no evidence of relaxation of uterine contraction could be felt. Ordinary abdominal palpation could detect none. Careful palpation of the fundus showed that at irregular intervals there was not so much a relaxation of the spasm as an increase. For when most relaxed the tension seemed to me as great as it usually is at the height of an expulsive pain, and I was every moment expecting that the uterus would rupture. Carefully watching the respiration, the pulse and the pupils, the woman was kept

as near the danger line as possible for three quarters of an hour and still there was no change. Labor had made no progress for four or more hours and something must be done. But what? The forceps could not be applied.

Thirty-five years ago Cæsarean section was not so like an afternoon picnic as it is to-day, and I did not know that any one recommended it for this condition. So far as my reading had gone, incision of an ergotized uterine cervix had always resulted fatally to both woman and child. Craniotomy only remained. But when? It could only be said that possibly fœtal life was not extinct. Was it best to wait until certain? The danger of rupture seemed too imminent. Besides it could not be known how much delay there would be. In many such cases embryotomy had also been necessary and then the mortality among the women has been very great, and any long delay would cause such injury to the maternal tissues as would certainly cause the woman's death. Taking into consideration the fact that slight contractions had been felt at the fundus when none could be felt at the lower uterine segment, induced me to hope that if craniotomy was very rapidly performed and if at the moment when the bulk in the lower segment was reduced, strong pressure should be applied to the fundus the uterus might be surprised into a different kind of contraction and the shoulders got to engage, and if so all difficulty would be over. Giving the midwife instruction how to make the pressure and telling her that when I gave the word to use all her strength, the program was carried out, and the result was what I had hoped for rather than expected. The placenta followed the child into the world, and except for the gush which came when the head was perforated there was hardly enough blood to soil the clothing. Five or six years before I wished to perform a not very difficult operation on the eyelids of an eight-year old girl (C. P.) and administered chloroform until a needle could be inserted into her body or limbs without eliciting any response, but when the eyelid was touched the orbiccularis muscle spasmodically contracted and prevented operation. So great was my faith that chloroform would relax the spasm, that it it was continued until I dared carry it no further, and it was fully six hours before the girl was on the right side of the danger line. I refused to make another trial and advised Mr. P. to take his daughter to Paofessor Holmes, of Chicago, and to be sure and tell him of my failure. He did so and after his return reported that when told with his lips the Professor said he did not anticipate any trouble, but that his countenance said, probably the young man has a few things to learn yet.

The next day he administered chloroform, but did not operate. Either because of his superior skill or superior caution it took him only two hours to get the girl out of danger. A few days after he tried again, using ether this time and again he did not operate. After another wait he operated without an anæsthetic, and then told Mr. P. never to permit anyone to give his child an anæsthetic again. If I had not had this experience, I should have been more persevering with chloroform in the case of uterine tetanus, and probably my reward would have been two funerals instead of one.

Neglected by Medical Men.

By Richard Grady, M. D., D. D. S., Baltimore, Maryland.

The writer recently read a paper before a medical association in Maryland, which invited considerable discussion, in which he claimed that there is a field of surgery and pathology, a sort of debatable ground between that occupied by the physician and the dentist, which is open to further research and which will amply repay the labor of investigation.

The lesson emphasized was that (1) a pain in a tooth by no means indicates that the tooth is the source of the trouble—it may be in another tooth, or in other tissues near or remote; (2) dental disorders may induce pathological conditions in other parts of the body or in the nervous structures themselves without the existence of any subjective intimations of pain in the teeth on the part of the patient.

In other words one may have toothache in the brain, the ear, the stomach; or one may have headache, gastralgia, etc., in the teeth, just as "eye headaches" are usually referred to the brow or to other portions of the head.

Eminent surgeons have been scarcely aware how serious are some of the maladies directly dependent upon tooth disease, and how largely the pathology of the teeth is associated with morbid changes in contiguous structures. The fairness of the statement is illustrated by examples of imperfect knowledge.

A tooth has, by an error in diagnosis, been mistaken for exostosis of the jaw bone, resulting in the excision of the angle of the lower jaw, which entirely destroyed mastication. Considerable portions of the jaw

bone, even as much as "half the inferior maxilla" have been removed, which a knowledge of the real nature of the disease and an early interference might have rendered quite unnecessary. An impacted tooth, producing a tumor in the right upper jaw and cheek, has been mistaken for cancer, and, in the belief that it was malignant, an operation was begun for its extirpation. The external orifice of an outward-pointing, alveolar abscess, dependent on a carious tooth, has been attributed to diseased bone in those conditions in which the opening occurs on the surface of the face, and an easily cured malady has been allowed to run its course and permanently disfigure the face. The symptoms produced in the painful eruption of wisdom teeth have been suspected for scrofulous caries of the jaw, for syphilis, and for cancer.

General systemic troubles resulting from diseased dental organs might be considered impossible were it not for instances in which debility, sleeplessness, nervous derangements, mental depression, etc., after resisting constitutional medication have yielded promptly to such treatment as was found necessary to restore a healthy condition of the mouth.

Amaurosis has been caused by crowding of teeth and abscess of antrum produced by a carious tooth. Facial neuralgia, cranial neuralgia, intense and general neuralgia, neuralgia of the neck and arm, neuralgia of the face, neck and arm, with partial paralysis of the arm, and intense neuralgia of the eye-ball and face and alteration of the color of the iris, have come from carious teeth. Deafness, in which the loss of hearing was evidently reflex paralysis, has been caused by a carious tooth, and hearing returned (within an hour after the extraction of the tooth) to the patient who had been deaf for four days. Interesting examples of perverted nutrition, dependent on dental nervous irritation, of epilepsy from a carious tooth, conclusive as to its cause, could be enumerated.

But the sympathetic or reflex disturbances of harmony caused by dental irritation are not more interesting or instructive than are the *converse* manifestations of pain or discomfort, experienced in the teeth, but originating elsewhere, and these will be discussed in a future article.

The Treatment of Catarrh.

By L. S. Rutherford, A. M., M. D., Kinston. N. C.

If we do often fail to cure catarrh, it must be ascribed to the erroneous ideas which still so prevail regarding the cause of catarrh and so long as the cause of a disease is not known it is impossible to prevent the continued reapperance of the disease. I shall endeavor to show that the symptoms of catarrh depend on a specific animal poison or germs; that they are attributable either to the material presence of this poison circulating in the blood, or to the irritation which it produces in those organs which are its constituted elements. I believe that the arrest of the function of the skin, from exposure to cold, throws back into the circulation, that which ought to have been eliminated as the cutaneous excretion; that this either by itself, or ulterior changes to which it gives rise in the blood, induces a condition of toxemia; that the vicarious emunctory of the material for those excretion the skin has been temporarilly rendered unequal by cold, it is the respiratory mucous membrane; that the principal local symptoms—Coryza, Tonsillitis, Bronchitis—depend upon the vascular changes in this excretory function, and by the irritation of the poison materially present thereat; that as long as the blood is thus contaminated the fever symptoms presist, and that its deputation is immediately attended by their abatement. Now, what warrant does the clinical history of catarrh give for such an interpretation? I think it warrants it in two ways—on physiological and pathological grounds. I need not go into the argument or even demonstration, as every up to date physician well knows the fact that which ought to be, and is not eliminated, becomes by being thrown back upon the circulation, tantamount to something introduced from without, and is a virtual poison. As to treatment, I have tried all the old, and many of the new remedies; for the past year I have used daily Glyco Thymoline (Kress) and find it the best catarrh fluid in the market; I have kept accurate notes of thirty cases which I have treated with Glyco Thymoline (Kress.) In every case the parasites came away in greater or lesser quantity; according to the nature of the case.

The mucous matter that comes away after the application of the nasal Douche, appears to be a living mass. Examine the ameba under the microscope and show them to your patients. Try the Glyco Thymoline (Kress) and cure your patients of catarrh. After the application of Glyco Thymoline (Kress) millions of the ameba literally flow away. I here give a few cases treated by me :—

Case No. 1., M. E. S., of La Grange, N.C., a school girl, family history good; she came

to me for treatment—she left my residence cured.

Case No. 2., Mrs. S. A. T., of Falling Creek, N. C., was treated for Catarrh; respiration (nasal) was obstructed, she was offensive to all the family; the mucous flowing from the nose had a bad smell—she was cured by the use of Glyco Thymoline (Kress)—thirty days treatment.

Case No. 3., Mrs. J. P. M., of Seven Springs, N. C., colored, had not only catarrh but a throat trouble for eight years; I put her on the usual treatment for three months and the Glyco Thymoline (Kress) cured the catarrh and she is no longer troubled with the throat. Secretion diminished at once, respiration became free, and she has gained in health—her friends did not expect her to get well.

As an antiseptic it has no peers.

How to Prepare Material to Send to the Microscopist.

By Hughes B. Hoyle, M. D., Professor Pathology and Bacteriology in the North Carolina Medical College.

In this day of advancement in the science of pathology and bacteriology, when the foremost men of the profession are using the microscope with the same regularity that they are the clinical thermometer and the stethoscope, there is little necessity for urging the claims of the microscope as an instrument of exact diagnosis.

The object of this paper is to serve as a guide to the busy practitioner who wishes the assistance of the microscopist.

Always label the specimen so that it may be distinguished from any similar one.

Be sure to tell how you prepared your specimen and what you suspect it to be.

1. Sputa for bacillus tuberculosis.

Collect sputa from patient early in the morning. That containing "cheesy masses" is the best. Put in a small vial, stop securely and send by express.

2. Pus for gonococci.

The pus may be collected on a cotton swab, placed in a vial, stopped securely to prevent evaporation and sent by express.

A better way is to spread the pus thinly on a "cover slip" by means of a platinum wire, dry in the air, pack in cotton, and send by mail. Several slips had better be prepared, as the spreading may be too thick in some of them.

3. Diphtheria.

Swab out the throat with a sterile cotton swab, place in a sterile test tube, stop with cotton, and send by express.

4. Plasmodium malariæ.

Cleanse the finger with a four per cent. solution of carbolic acid, then with alcohol, wrap tightly to produce a temporary congestion, prick with a new sharp needle, collect a large drop of blood on one slide, and with a second slide spread the blood over the entire surface at a single stroke. Several slides should be prepared as some of them are likely to be imperfectly spread. The spreading should be done quickly before coagulation begins. These slides may be packed in cotton, and sent by mail.

5. The serum test for typhoid fever.

The finger is wrapped and pricked as in No. 4. Three or four drops of blood are collected in a small vial, which is securely stopped and sent by express.

An easier method is to collect the blood on a piece of filter paper, dry in the air and send by mail. There should be at least one square inch of filter paper saturated with blood.

This test is not conclusive before the second week of typhoid fever. Should a differential diagnosis be desired, both the serum test and the examination for the malarial organisms should be made.

6. Urine.

Urine for either microscopical or chemical examination should be a portion of the mixed urine of the whole day.

But in hot weather, when decomposition begins early, a portion of the morning's urine may be used. Put four ounces in a bottle, stop securely and send by express.

7. Water.

Water for bacteriological examination should be collected in bulbs prepared for the purpose. These may be obtained from any dealer in microscopical goods, or from a microscopist.

Immerse the bulb several inches below the surface of the water and break off the point of the stem. The bulb will fill with water. Seal the stem in the flame of an alcohol lamp, pack in ice and send at once by express. Several such bulbs should be prepared. In case the bulbs are not obtainable, a glass stoppered bottle should be sterilized by boiling one hour. Then fill with water and seal with sealing wax and pack in ice.

8. Tumors.

Cut a specimen from the developing part of the tumor at least one-eighth of an inch square. Put in alcohol and send by express. Always send a clinical description of the case and be sure to state the part of the body from which the tumor was taken.

Chronic Gonorrhœal Prostatitis.*,

By Dr. Carl Proegler, Fort Wayne, Ind.

The disease in question is one of the most intractable, for the urinary surgeon to treat.

Patients afflicted with it are not aware of the seriousness of the disease. Generally they have been treated for nervousness, etc., and are, as a general rule, an easy prey for quacks. Most of the cases originate from a neglected gonorrhœa, very seldom developing from an acute prostatitis, very often a chronic posterior urethritis is the cause of the disease, also masturbation, coitus interruptus, veneral excesses, etc.

Pathologically, we find chronic alteration of the mucosa of the pars prostatica, even going as far as the ductus prostatitis. By urethroscopic examination we find that the surroundings of the colliculis seminalis show intense redness of the mucosa, often causing spontaneous bleeding.

These local foci produce very often granulation, ulceration, etc. It might be well to review here briefly the anatomy of the urethra from within out.

Epithelium, which consists of three layers, subepithelial tissue, consisting of connective tissue, blood and lymph vessels; mucous membrane, sub- mucous tissue, two layers of muscular and mucous tissue. The mucous membrane is studded with small cavities, called follicles, in these at times may lurk the germs, which may make a prostatitis indefinite. Half an inch from the meatus is a small band like projection, sometimes well developed, do not diagnosticate it as stricture, it is the navicular valve. Nothing more is found of importance until the prostatic urethra is reached, here we find openings of the ejaculatory ducts, prostatic sinuses, caput gallinaginis and innumerable follicles. The mucous membrane varies in color, the posterior urethra is very red, almost resembling blood. The mucous membrane of the pars prostatica is rich in glands, which are enclosed in the prostate and empty on both sides of the caput gallinaginis.

Inflammation generally extends to the excretory ducts of these glands and they become occluded by plugs of mucous, pus and epithelium, which has the appearance of a comma. If the inflammation extends deeply beyond the mucous membrane, the process is entirely different. In the pars prostatica, the mucous membrane passes over the prostate, an extremely complex organ, very rich in nerves and glands, it is intimately related to the sexual organs and its development is analogous in a certain sense to the female uterus, but it belongs to the uroproetic system on account of its muscular tissue. Extension of the chronic inflammation at first to caput gallinaginis and the glands of the prostate, then to the prostate itself producing a severe prostatitis.

Irritative symptoms of various kinds set in and affect the secretion of urine as well as the sexual sphere of the nervous system. Complaints are manifold, painful sensation on the rectum, perineum, deep urethræ, along the thighs and loins, getting worse by prolonged standing or walking. Painful micturition and defecation, also painful erections sometimes 5 to 6 times during the night without any emissions, if married coitus is hardly accomplished and if accomplished ejaculation takes place ante portas, or excretion may fail entirely at the most essential period for coition. No wonder that neurasthenia torments the patient. In spite of good appetite and nutrition, they are generally in a deplorable condition. Impotence and dry pollution, so to speak, depress the mind, the nervous disturbances spread farther and spinal symptoms are added. These include the various manifestation of spinal irritation, pressure and pain in the back, fornication, cold and hot along the spine, radiating neuralgias and paralysis, particular the lumbar and sacral plexus. Gastric and intestinal catarrh may set in, caused by atony, the nervous symptoms becomes more severe, the unstable vasomotor system causes rapidly changing color, pallor and redness, especially in the face. Digestion gets poor, the local symptoms in the domain of the uroproétic system and sexual organs attain considerable intensity. No wonder that not a few of these unfortunates terminate their existence by suicide. This picture is not exagerated, but perfectly true.

In a patient sent to me by Prof. Belfield of Chicago, the symptoms were even worse, but by patience and perseverance, I succeeded in curing the patient of his troublesome affection. But not all cases are of such an intractable type. Prognosis is generally good, and it is very seldom that we fail to relieve the sufferings of the patient.

Diagnosis is most generally based on examination of the urine, an excretion of a dirty mucous like discharge is frequently seen, containing very seldom gonococci, if there is doubt, recourse must be had to culture experiments to clear up any doubt in this respect. We most always find a well developed prostatorrhœa.

In using a 1 per cent. solution of ammo-

*Read before the Allen County Medical Society, June 14th, 1898.

niated phosphoric acid, we will find microscopically well defined Boettgers sperm crystals. Examination by rectum has always to be made. Mixed forms of prostatorrhœa and spermtorrhœa are not very seldom, therefore the gland ought to be pressed from behind or milked.

If there is only a thin milk like substance without leucocytes, we have normal prostatic fluid and no prostatitis. Amyloid concretions, cylinder cells and especially sperm crystals make the diagnosis sure. Since the introduction of Jeannets and Valentines method in using high irrigation for all inflammatory conditions of the urethra, the treatment is very much simplified. In all cases where the track of the urethra is very sensitive I use for dilating purpose alone high irrigation. Irrigation of the posterior urethra and prostate premises overcoming the compressor urethral (shut off muscle). The force of fluid from a height of nine feet overcomes the sphincter vesicæ as well, as soon as the posterior urethra is filled. The sphincter vesicæ being but a feeble bundle of muscular fibres, dilatation and irrigation of the posterior urethra. which is practically part of the bladder is hereby easily accomplished.

I begin with a pint of warm water, the temperature of which ought not to be less than eighty. The patient is instructed to hold the water as long as he can, afterwards I use the irrigation as cold as 60 after a few days the patient can bear now some instrumentation. I use generally Ulzman's or Guyon's deep urethral syringe with a capacity of three ounces, with a solution of nitrate of silver 1-5000 and give these injections every third day besides the irrigation.

In uncomplicated cases a cure will generally be affected within four to six weeks.

Some cases, particularly those in which chronic suppuration of the prostate exists, do not materially improve with the above treatment. In these cases the best result is obtained by either careful stretching of the prostate by special dilators and by parenthymatous injection from the perineum. These injections are used with the ordinary hypodermic syringe provided with a strong needle three inches long, as recommended by Prof. Benfield of Chicago.

Iodine-trichloride solution is the agent employed ten to thirty minims being daily distributed in the gland during the gradual withdrawal of the needle.

When the chronic inflammation has involved the vas deferens and epididymitis, a suspensory bandage is a valuable adjuvant. Internal medications are nil, the general health should be most carefully maintained, the extreme despondency is better relieved by evident improvement in the local condition than by good advice as usually recommended.

As a safe hypnotic I use for this class of cases Trional in 15 grain doses in hot water shortly before retiring. Sometimes hot sitzbath and suppositories of iodide potassium, opium and belladonna act well, but I have seldom used them.

In all our text-books cocaine injections are recommended preceding any instrumentation, but I have found by experience that nearly all these patients do not bear cocaine very well, and I well remember a case where I nearly lost the patient, a rather bad predicament, to be found afterwards with a corpse in your office.

Any dilation, stretching, etc., ought to be done under propor directed anesthesiæ.

Multiple Neuritis, Differential Diagnosis and Treatment.

By Edward D. Fisher, M. D., Professor of Nervous Diseases at the Medical School of the New York University.

By this term I mean an inflammation which involves many peripheral nerves either symmetrically, that is, in pairs, or singly, in which the distribution of the lesion is disseminated.

The importance of the diagnosis lies in differentiating a peripheral nerve lesion which usually has a favorable prognosis, from organic lesions or diseases of the spinal cord, in which the prognosis is usually unfavorable.

Etiology.—The causes of multiple neuritis are various; some, however, are more frequent than others and also more destructive to the integrity of the nerve itself. The most common are alcohol, lead, arsenic, mercury, diphtheria, typhoid, influenza, malaria, rheumatism, diabetes, infectious diseases, scarlet fever, measles, tuberculosis, beri-beri, &c.; syphilis, even the poison from the bite of a centipede, as related by Dr. H. Riley of Texas; puerperal states, the cause in these cases being either septic or cachectic, exposure, local injuries, as from pressure, trauma, &c., or again, from actual tearing or stretching of the nerves in labor, which may be multiple although usually local, &c.

Symptoms.—In describing the symptoms, I shall take a typical case of acute multiple neuritis, due to alcohol as in it we have all the characteristic conditions in a pronounced state, differing however in no respect from the symptoms shown in all cases of neuritis,

except in so far as they are more completely developed.

The characteristic condition in neuritis is paralysis associated with wasting and flaccidity of the muscles, with later contraction of the unparalyzed muscles, the result of their being unopposed by their natural opposing fellows. The reflexes are also either entirely lost or much decreased. The electrical reactions are changed, and this applies whether the neuritis is single or multiple. We find a loss of response to the faradic current and the reaction of degeneration to the galvanic current.

A neuritis of a single nerve, as in facial paralysis, or Bell's palsy, exemplifies this point very clearly for single nerve lesions, and alcoholic multiple neuritis just as clearly for an acute multiple lesion.

I will now proceed to describe alcoholic multiple neuritis.

The onset of the symptoms is usually somewhat gradual, although at times very sudden, with considerable temperature, 102–4, resembling that of acute myelitis or hæmorrhage into the cord. There is usually a feeling of numbness and weakness commencing in the lower extremities. The weakness increases to often absolute paralysis, so that the patient is unable to move the toes or feet, however some motion remaining in the thigh muscles. The tibialis anticus and external peronæus muscles are principally affected, so that the feet soon have the characteristic foot-drop appearance. As the gastroculcus and calf muscles are little affected, there is considerable contraction of the toes with extension of the ankle. The muscles are flaccid. The paralysis extends upward involving especially the extensors of the forearm and thus causing double wrist-drop. Associated with them soon appears paralysis and wasting of the interossei muscles of the hand and the thenas and hyperthenas groups. The hand now presents the characteristic appearance of Main-en-Griffe or claw shape hand, the unaffected flexors showing marked contraction later on. In extreme cases the trunk muscles are affected so that the patient is unable to move his body in bed, or to assume a sitting position, the muscles of respiration becoming affected and also the muscles of the heart, causing thus a most dangerous class of motor symptoms which not infrequently are the direct causes of death.

The motor symptoms as thus detailed (especially where the disease has not progressed to the upper extremities) do not differ in appearance from those of a case of myelitis, and without the presence of other symptoms, a diagnosis from it could not be made.

The course of the disease is fairly rapid, so that in a week or ten days complete paralysis may be present, and a fatal issue may occur from cardial paralysis in as brief a period.

In addition to this motor paralysis we find the reflexes of both upper and lower extremities lost. In some few cases where the onset of the disease is very acute, I have found that the reflexes for twenty-four hours or so are exaggerated, but soon are lost. The electrical responses show loss to faradic reaction and reaction of degeneration to galvanism.

The sensory disturbances are very distinctive and differentiate the disease from all others. The patient may first complain of some tingling and formication, commencing in the foot or legs; later this passes on to a sense of intense heat or feeling of burning, most distressing and uncomfortable, although rarely extremely painful.

On examination the objective symptoms drawn out are also very characteristic. While the patient lies quietly there is, as I have said, no actual acute pain, but so soon as in these acute cases any pressure is made on the muscles or along the nerve, the most exquisite pain is caused, so that the patient may scream out when approached, fearing that he may be touched. I have seen many such cases in women, for although alcoholic neuritis is common in men, it is far more frequent in women, and in my experience usually runs a more acute course.

Anæsthesia to touch, temperature or pain, is never complete in these cases. We find, however, areas hyperæsthetic and areas anæsthetic lying side by side—never a complete line of demarkation of anæsthesia as in myelitis.

There is rarely if ever any rectal or vesical disturbance—that is, paralysis—nor are trophic changes marked in the paralyzed parts, except perhaps the appearance of vesicles and the characteristic shiny, dry appearance of the skin, in the later stages, which is peculiar to neuritis in general. In the acute stage there is often marked œdema and the skin is moist and cold with a marbled appearance.

Bedsores are rarely present and never of that character peculiar to myelitis with extensive necrosis. It is usually of the type due to pressure and easily responds to proper care and protection from pressure.

This is the usual picture of an acute case of multiple neuritis, the patient lying completely helpless with double foot and wrist drop, and progressing muscular atrophy and extreme pain on pressure over the muscles and nerves. More rarely we find the cranial nerves involved, so that to this picture

is added that of facial paralysis and ocular muscle paralysis, even deglutition being affected. Probably the central nervous system is more especially involved in these cases, the medulla being affected. This is the more probable, for in speaking of the pathology of the disease, we shall see that rarely does the spinal cord escape some changes.

Again I would call attention to the class of mental symptoms which occur in multiple neuritis, more especially alcoholic.

In February, 1892, I read a paper before the State Society on "Mental Derangements in Multiple Neuritis." I then stated that the characteristic mental state of these patients was amnesia. They seem to forget time and place. In a recent case under my care which resulted fatally, the patient, although almost helpless in bed, assured me he had been down to business the day previous, and related what he had done, &c. Apparently he spoke rationally, but the next day had no recollection of his conversation of the day before. He had also forgotten how long he had been ill, or the day of the week.

We find, therefore, that the brain does not escape, and, in fact, pathological findings confirm this.

Time will not permit me to take up the various forms of multiple neuritis from other lesions, that is to describe them in detail. They differ from this form only in their distribution of the paralysis and in the usual degree of sensory disturbance. The cardinal symptoms of neuritis are common to all, i. e., paralysis with wasting, loss of reflexes, sensory disturbance and changes of electrical reaction.

In multiple neuritis from lead, the onset of the neuritis is usually more gradual; it usually first affects the upper extremities, giving them the usual wrist drop, wasting of extensors of the forearm and also of the hand; more rarely it extends to the lower extremities. In acute overwhelming of the system by lead, however, we often have also acute mental symptoms.

Arsenic has the same primary distribution of the paralysis as in alcohol. In several cases of acute poisoning by Paris green, I have seen the cases run the typical course I have already described. We find also changes in the cord as well as the nerves.

Diphtheria has its peculiar course also of distribution, otherwise it does not differ from other forms. The pharynx is first involved, and while the extremities often escape extreme paralysis, I have observed cases not a few, where the paralysis has been extreme and the sensory disturbance marked. Ziemssen, in the Klinishe Vostrage, has a very thorough and complete description of a case of diphtheritic paralysis in an article of this form of neuritis, in which the paralysis became general, after first involving the pharynx and vocal cords. As he says, the affection goes on step by step, and cannot be due to the direct primary infection of the diphtheria, but belongs to a secondary or tertiary stage of the disease. It first passes from the tonsils to the pharynx, the larynx, œsophagus, and later, the lower extremities, passing then, as in alcoholic neuritis, to the upper extremities. The heart through the vagus is affected. The author refers to a case of a young woman, æt. 20, who had had very slight symptoms of diphtheritic infection of the throat, who, however, developed all the characteristic symptoms of paralysis of deglutition, nasal paralysis of lower extremities, ending in sudden death, evidently due to the cardiac paralysis. A peculiarly similar case came under my care, in which the idea of a previous diphtheritic infection was doubted at first by the attending physician. Ziemssen believes that the lesion is essentially a neuritis of the peripheral nerves, but also by autopsies shows that the cord, especially the anterior horns, and also the medulla, are involved. He also says the wasting of the muscles is often as rapid and extreme as in poliomyelitis.

Syphilis is given as a cause of multiple neuritis. I have more frequently seen single nerves involved, or if many are affected, it is not a symmetrical lesion, the nerves being affected in pairs as already described.

In the acute infectious diseases, in influenza and malaria, I have also observed multiple neuritis.

In puerperal states it may also occur. The course is similar, however, to that described, the etiological factors not entering is, especially as causing any special subdivision of neuritis.

Prognosis.—The prognosis is usually favorable, as far as a fatal issue is concerned, and in fact a perfect recovery may take place in all the muscles. The cause of death in most of the fatal cases is cardiac paralysis, due probably to affection of the pneumogastric, and atrophy of the cardiac muscles. Complete recovery from the paralysis may not take place for a year.

Pathology.—The lesion in the peripheral nerves is characterized by either interstitial or parechymatous neuritis. In the former there is an increase of nuclei of the sheath of Scherann, the internodal cells become swollen, the axis cylinder is often the seat of varicosities and becomes degenerated, the fibres may become converted into connective tissue. In the parenchy-

matous form, the axis cylinder is principally affected, becomes grander, and may entirely disappear; the myeline becomes broken up, and the sheath filled with fatty globules. It is rare probably that changes either in alcoholic, lead, or neurities from any of the infectious diseases, remains confined to the peripheral nerves.

Pal, in an article on multiple neuritis, in 1891, records several cases where there was extensive disease in the various tracts of the spinal cord. His case is as follows:

"The patient, aged twenty-one years, showed in his first attack, colic and convulsion. A transient paralysis of the right abducens and facial, and later, of the left side. Papillis on both sides, Hemorrhage in the right eye, the vessels, especially the veins, being strangulated. Patient could distinguish light from darkness; upper extremities ataxic and weak; lower extremities atrophic; patellar reflex absent. Sensibility reduced.

Autopsy.—Showed partial degeneration in the optic, oculo-motor, abducens, facial, right radial, and left peroneal. The cord showed degeneration of the white columns of the disseminated character, as also of some of the cells in the anterior horn, and the posterior nerve roots."

In conclusion, if I understand the author correctly, he finds in his case a disseminated sclerosis, all the tracts of the cord being affected in different areas, and from this, and other causes, he holds that multiple neuritis affects the nerves in the tract of the cord in the same manner as it does the peripheral nerves.

From the literature of the subject (for reference to which I would refer again to Dr. Pal's monograph), and from the case I have referred to, it is evident that the various toxic agents, as arsenic, lead, alcohol, etc., cause multiple neuritis, involving at times the upper and lower extremities, although with each individual agent certain regions are more often selected; and also that with the peripheral lesion there is not infrequently associated organic lesions of the central nervous system.

In a study of a case of lead palsy of long duration, in a painter, I found degeneration in the peripheral nerves, as also in the various tracts of the spinal cord, as shown in the following case:

A. E., painter, first seen June, 1890. Family history negative. Previous history: He has worked at his trade since the age of thirteen; when twenty-one he had an attack of painter's colic, with some weakness of the arms. Two years later he had a second attack, since which time there have been several mild attacks. For the past two years he has become progressively weaker in his hands, which have become wasted, so that he is unable to hold his brush. Three months ago he had an epileptic seizure, in which he lost consciousness, and was taken to Bellevue Hospital. He remained there for three months, and improved slightly.

Present condition: Patient anæmic and sallow. Complains of weakness in both forearms and hands, especially of the latter, which present the appearance seen in muscular atrophy. Heart hypertrophied; radial arteries, as also the temporals, show high tension. Eyesight poor; patient is unable to read well unless with a bright light. Ophthalmoscopic examination by Dr. C. S. Bull showed the following: R. E., 20-XXX; L. E., 20-C; irregular hemianopsia, the nasal half of the field being intact. R. E.: Exudative neuro-retinitis, with intense exudation over the disc and neighboring portions of the retina. L. E.: Atrophy of the optic nerve and retina, with occlusion of some of the vessels. Suspected degenerative nephritis. Examination showed marked loss of power in both forearms and hands, more marked on the right side. Great atrophy of the interossei, and of the muscles of the ball of the thumbs. Grasp feeble; no tremor; able to extend the hand with great difficulty. Sensation lowered to heat and cold, and to touch and pain, and, to a slight degree, to the faradic current. Electrical examination: The extensors of the forearm show excitability to the faradic current, but much reduced. Supinators unaffected. Muscles of the hands, the interossei and opponens pollicis show no response to faradism. There was a loss of excitability to galvanism, but no reaction of degeneration. There was no affection of the lower extremities, nor was there rectal or vesical paralysis. Reflexes were normal; no pain on pressure along the course of the nerve or in the muscles. Urine: sp. gr. 1008; albumin.

He was put on potass. iodid. and iron, with galvanism, three times a week.

There was no change in the condition of the muscles during the following ten months, either in power, or in response to the electrical currents; but as the Bright's disease progressed, he entered Bellevue Hospital again, where he died, March, 1891.

Autopsy.—Heart hypertrophied; lungs normal; kidneys the seat of interstitial nephritis; brain normal, except that the arteries were the seat of atheromatous changes. The cord, including the cervical and upper dorsal portions, and the musculospiral nerve were hardened in Muller's

Fluid, and examined microscopically by Dr. W. Coleman, of the Loomis Laboratory. The peripheral nerves were markedly degenerated. The cord at the upper dorsal region showed some atrophy of the anterior horns, especially of one side, and also of the antero-lateral tracts of that side. In certain levels, there was evident sclerosis of the column of Goll, and also in Lissauer's tract there was thickening of the meninges and of the blood vessels. In the substance of the left anterior cornua there was an apparent breaking down, leading to loss of substance. This was probably increased artificially in the examination. The anterior nerve roots also showed degeneration. While these changes are not extensive, still the evidence is clear, of a slow, progressive, degenerative process.(1)

We have, then, changes indicative of sclerosis, disseminated in character. The whole body was evidently the seat of like changes, as shown in the arteries and kidneys.

Again the brain reveals in alcoholic neuritis marked degeneration in the cortex cells.

It is probable that the disease affects more or less generally the nervous system as a whole, in some, or perhaps most instances, affecting the peripheral nerves primarily and in like manner, or a later period, the spinal cord and brain.

In accepting the neuron theory for a working basis for the study of nervous diseases, we may have to come to the conclusion that peripheral neuritis, so-called, really starts in the cells of the anterior horns and the spinal ganglion; and also to account for changes in the lateral tract of the cord, in the motor cells of the cerebrum. The later stains of Nissl, Wurgent and Golgi will make it possible for us to investigate this more fully in the future. At present we can only say that both lesions of the peripheral and central nervous system are present, and whether they occur independently or that the former depends on the latter, is not as yet known. Charcot, Lepau, Leyden, Vulpeau, Wendel, ascribe the lesion in diphtheritic paralysis to the peripheral nerves. Dajesine found, however, the anterior horns the seat of parenchymatous degeneration and ascribed the neuritis as secondary to it. However, the two conditions may have taken place simultaneously. The blood vessels show changes in the very early onset of neuritis. There is hyperæmia, capillary hemorrhages, exudation of red blood corpuscles, thrombosis, embolism; this is seen in the anterior horns, as in polomyelitis.

(1) See article by author.—1892.

Differential Diagnosis.—From myeletis it is distinguished by the presence of pain on pressure over the muscles and nerves, a symptom never present in myelitis. In the latter, also, we have paralysis of the bladder and rectum, extensive bedsores, usually exaggerated reflexes; also, myelitis, in the majority of cases, is confined to the lower extremities, and again we get loss of sensation in the paralyzed parts. In the later stages, the difference between the two is still more marked. In myelities, the recovery takes place with exaggerated reflexes and marked rigidity, while in the chronic stage, or in the period of recovery in neutritis, there is flacidity and absence of reflexes or evidence of a slight return. The patient at this period resembles very closely a case of locomotor ataxia. In neuritis indeed, although the paralysis may be completely recovered from, the loss of the reflexes may be permanent.

Locomotor ataxia is often taken for the chronic form of multiple neuritis. In both we have some inco-ordination and the walk in each is not dissimilar—the foot drop in neuritis causing a careful lifting of the foot from the ground, not unlike that of tabes; there is also loss of reflexes.

The characteristic changes in the pupil, the so-called Argyll-Robertson pupil, is diagnostic of tabes, nor is there the pain on pressure along the nerves, although some peripheral neuritis may exist.

Progressive muscular atrophy can only be mistaken for neuritis in the very subacute or chronic cases especially of lead or alcoholic neuritis. At times a diagnosis is very difficult, and also in not a few cases the peripheral lesion progresses with organic disease of the spinal cord, causing a typical progressive muscular atrophy or amyotrophic lateral sclerosis.

From acute ascending paralysis or Landing disease, the acuteness of the onset and course, and its rapidly fatal termination, frequently inside of a week, together with an absence of any electrical changes or sensory disturbance, or even wasting of the paralyzed muscles, sufficiently mark the disease.

The pathology of the disease is not definitely known, and probably some cases which have been reported as Landing's paralysis were acute multiple neuritis.

Poliomyelitis essentially differentiates itself from neuritis by the absence of sensory disturbance, the symptoms all being motor. In some very acute cases, however, pain may be present for a few days, probably

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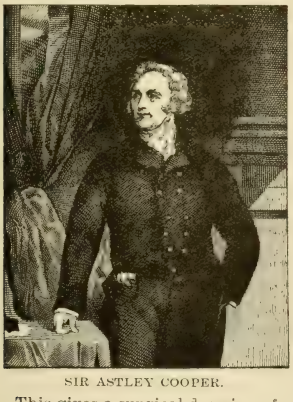

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due to a congestion of the meninges. This passes away, however, in a comparatively short time,

Syringo myelia is so rare a disease that we seldom have to consider it; its symptoms are characteristic.

Treatment.—The first point is the removal of the cause if possible. This in alcoholic cases is absolutely necessary. A peculiar instance of alcoholic neuritis of apparently a very innocent character came under my care some two years ago. The patient had been subsisting on milk punches for some time owing to some gastric trouble. Multiple neuritis developed of a most severe form.

Rest must be enjoined from the very beginning—before the complete paralysis develops which enforces it. No treatment of the paralyzed muscles is necessary at first—massage or electricity if it could be endured even, is contraindicated. Local applications to the painful joints and muscles or cotton batting, fomentations, even sinapisms may give relief, or lead lotion. Warmth is usually most grateful. Have the bed clothes well removed from pressing on the feet. As the atrophy progresses and it cannot be prevented, watch against contraction of the healthy muscles and apply appropriate apparatus to prevent deformity. It is much easier to prevent it at this time than to be compelled to cut the shortened tendons later.

For the pain and burning sensation, antipyrin and potassium bromid often give relief, or phenacetine and codeine in combination. At times only morphine can be relied on. Potass. iodid I often give from the onset. In specific cases or lead cases, it is of course indicated. I give strychnine somewhat later in the disease, and have not found that hypodermatically it is better borne or more effective, nor do I advise excessive dosage. As soon as pain has ceased commence massage and electricity. Nutrition must be maintained, especially in diphtheritic cases, artificial feeding, etc.

Eye Massage.

Whenever your organs of sight feel weak, do not claw at them with the knuckles, so to express it. You must not massage your eyes the same way you would the stronger parts of the body. They need help from the hands, but this help must be administered in a very gentle and delicate method.

John Quincy Adams had a way of treating his eyes which, it is said, preserved their vision to old age, without the help of spectacles.

This was to place his thum and fore-finger each upon an eyelid, and gently rub them towards the nose a number of times each day. The action encourages circulation of blood in that locality, does away with the tiny spots that sometimes float before the vision, and prevents that flattening of the lenses which causes dimness of sight at a certain focus.

It is wonderful how much good can be done the eyes of people of all ages by using this simple exercise ten or fifteen minutes each day.

If you are where it may be inconvenient to measure time, as in the dark, it is well to count the number of passes made by the fingers over the eyes, until you have reached the number that you have demonstrated by experiment that time will allow.

For instance, when you awake in the night and have the blues because your "sight is failing," spend a little time massaging the eyes, instead of worrying about them.

Temporary Intra-Abdominal Compression of the Aorta Above its Bifurcation in Operations for Pelvic and abdominal Tumors.

In connection with the details of a successful operation for double malignant ovarian tumors, with many adhesions, Lennander describes a method of digital intra-abdominal compression of the aorta which he employed with very gratifying results. The deductions which he draws from this case are the following: (Boston Medical and Surgical Journal.)

1. A wide compression on the aorta above its bifurcation makes the entire true pelvis practically bloodless. 2. If the common iliac artery is compressed on the vertebræ or the os sacrum above the sacro-iliac synchondrosis, the half of the pelvis is rendered nearly bloodless. 3. The compression was employed for three-quarters of an hour in this instance, with no serious effects; it should not be necessary longer. 4. When the compression ceases, a rapid lowering of the heart's action, due to vasomotor dilatation, should be guarded against by a normal salt solution, intravenous injection. 5. In resections of the spleen or the extirpation of a fixed spleen, the arteria linealis at the upper end of the spleen may be compressed against the vertebræ 6. In severe and difficult operations upon the kidney, where the peritoneal cavity is necessarily opened, the compression of the renal vessels against the vertebræ will be of service.

The author adds a foot-note of the fact, just discovereg by him, that Senn had previously suggested intra-abdominal compression of the aorta in military surgery.

THE

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Oh! who would inhabit
This bleak world alone."

—Moore.

Webster's definition of a friend is, "one who entertains for another such sentiments of esteem, respect and affection that he seeks his society and welfare"—a well wisher.

Friendship is founded on confidence, confidence on integrity; and without integrity there can be no friendship. To have professional friends we must be worthy of them, promoters of each other's welfare and happiness, all *geutlemen* will be *friends*. How endearing is the title of friend; what a charm in the very name of friendship! How the mind turns at once to the circle at the fireside, for it is here that friendship is seen in all its beauty and intensity.

The mother's devotion has ever been the theme of the poet's song and the minstrel's strain and filial love has been promised in its fulfillment. Desolate indeed must be that heart which cannot look back to the early quiet joys of home. The remembrance of a parent's love hath often come back to the lone wanderer like a long-forgotten strain, to cheer him in his solitude and calm his weary spirit; and feelings of hatred at the world's ingratitude have given way to kindlier emotion, as he thought of his earliest, his truest friend—his mother. It causes his memory to revert to the old home with all its familiar surroundings, with its moss-grown roof, that in turn, "lets in the sunshine and the rain," to his pious father and his sainted mother, who have long since crossed the dark river" and "rest under the shade of the trees"—that silent depository of the lowly dead; to the bright-eyed brother and golden haired sister of long ago, and the coy little maiden, who in turn kept house for him one day, his brother the next; and a little grassy mound on the hillside across the meadow, near the greenwood, rises to view, and a few "pious drops" gather in the eyes, as "he thinks of her he loved so well, and those early broken ties." How fond recollection calls to mind his dumb playmates; his faithful dog, his gentle cow and his playful colt—long since all "have quietly mingled their bones in the dust." Throughout all animate nature is this principle recognized. The humble ant shows attachment to his fellow-worker, and the busy bee will permit no intruder in its hive, and so up through the scale of created beings is this ruling principle evident, increasing gradually in power, until in man, under the guidance of reason, it is displayed in its fullest development. It is the basis of patriotism—that love of country which nerves the arm and fires the heart to protect our native soil from the step of the invader—our hearthstone from the finger of the oppressor. It imparts hope to the exile, when sweet strains of some home melody strikes his ear, with all its hallowed associations. High and low, rich and poor, acknowledge its power. It heightens the joys of wealth in the gilded palace, and alleviates the misery of squalid poverty in the hovel. Even the wicked, whose hearts have been worn away by the constant drippings of evil, yield to its influence. History has given us a beautiful account of the ties of friendship that existed between Damon and Pythias. The former having been condemned tc die, obtained permission from Dionysius, to visit his home and bid farewell to his family, kindred and friends, the latter gives himself, as a ransom in prison, to suffer the punishment in his stead in case he did not return at the appointed time. Damon was punctual; and this striking instance of friendship so affected the king that he at once pardoned Damon and requested to become his friend.

"But whether on the scaffold high,
Or in the battle's van,
The fittest place where man can die
Is where he dies for man."

A friendship that is not willing to give and do more than it receives is base indeed. To the physician, whose mind is aright, there is no pleasure so great as the consciousness of having done a good action. The incense of prayer and praise is doubly fragrant, when performed by deeds of benevolence and kindness. How much we all need a brother's helping hand! We start on life's voyage down the stream of time, the banks are strewn with flowers, we do not see the hidden thorns, we do not inhale tbe lurking poison—we glide on gently, the distant mountains bright with hope, and all beyond, an expected Paradise.

But will the stream always be smooth? Shall we not feel the thorns? Shall we not inhale the poison? How cross the mountains? The pilgrim's staff may break in ascending the rugged heights. How welcome then a brother's hand to ease us a little of our burden. Let us suffer ignominy and contumely ourselves and forever remain unrecognized by the world rather than betray the confidence imposed in us by a professional brother. Let a spirit of fairness, of justice, of right prevail; let it actuate us in all our professional intercourse with each other.

It matters not how humble or obscure may have been the birth or surroundings of our brother practitioner in early life, or what may have been his calling or trade previous to his professional life, he has a just claim on our kind offerings, courtesy, favor and respect. Let us remember, in the language of an eloquent writer, that pride is unstable and seldom the same, that she feeds upon *opinion* and is as *fickle* as her *food*. She builds her lofty structures on a sandy foundation—the applause of human beings every moment liable to change. But virtue is uniform and permanent; and fixed upon a rock are the towers of her habitation. While our brother may not have been brought up in the schools and colleges of the learned, he may have been trained in one far superior for eliciting the powers of an original mind—that severe school of adversity—that perilous ordeal where the feeble minded perish; but the great of heart come out of the fires purified and resplendent in tenfold brightness. They rebound by the very impulse and pressure of the blow that was designed to crush them, and reach their elevation in the sky. The misfortunes of the virtuous often turn to their advantage. When the world persecutes them they are generally driven into some illustrious career. Misfortunes are the road to great talents; or, at least, to great virtues, which are far preferable.

The late Oliver Wendell Holmes says in "Poems of the Class of '29"—

> "A few swift years, and who can show
> Which dust was Bill and which was Joe?"

While this is true, we cannot, if we would, live, or die, wholly unto ourselves. No human being can pass away into death without the knowledge or sympathy of some one. An individual may fall unseen, unwept, unhonored and unsung, but when he drops like a pebble into the ocean of eternity, a ripple is created which must forever widen towards the limitless shore.

Then let us abide in our sphere, "nor wish it other than it is," do the right, as it is given us to know the right, that an approving conscience may be ours when life's work is ended; and joy will come oftener than grief, smiles oftener than tears, and many a bright ray of glad sunshine will burst through the clouds of a stormy sky, and hope itself will find the unknown quantities of time in the equations of the Great Beyond.

RULES AND CUSTOMS.

We have been much interested in this subject, and have followed its significance with curious attention—attention which has not been confined particularly to the subject of any text; nor indeed could be, since what is true of Rules and Customs in one instance applies as well in others. Rules and Customs are expressions, the sense of which pervades professional minds to an extent scarcely noticed until brought up by some special incident; in fact they are paramount to any issue of professional consideration; and while the necessary consecutive letters do not always announce the names, in sense they are so found, and their application instanced in the treatment of all diseases, as descriptively, and faithfully portrayed by physicians.

From the rostrums of lecture rooms, their principals are expounded, and there in the interest of the student a knowledge of their precocious truths is elicited. It is there the idea of customs is inculcated, and it is there its essentials are conceived.

Taught by inference, supported by practice, its usage is universal, and its position in medical literature and work assured.

Text-books enumerate and recommend drugs that "it is a custom to use" in certain diseases.

Lecturers install drugs with diseases, and tell of "the custom to give them."

Such an effect is observed when such a drug is given, they say, and if the student wishes to know he will have to institute proceedings to find why, at, times customs fail.

Exceptions to the rule, and the failure of customs to act, are placeboes, that do not always satisfy, yet they are as accurate, and the saying means as much as the typical cases, which we are so often told act according to rule.

Through a cycle of changes all diseases pass, and pass with such frequency as to establish for themselves Rules and Customs by which they may be diagnosed.

Here this subject is of importance and with its assistance diseases are differentiated.

The time intervening between the entrance of germs to the body and their manifestations and subsequent stages act, in point of time, and character, with such pre-

cision as to be denominated periods. Periods establish the Rules and Customs of diseases, and by these prescribed guides diseases are classified, their symptoms individualized, and treatment modeled.

To these titles order owes its existence, and diseases their names. Were it not that symptoms act according to rule, and customs are observed in the clinical histories of disease, plainness would be obscured and the lines of classical distinction would fade.

An influence as powerful, and one that sways the world, as certainly must needs exceed its own boundary, and usurp the functions of other powers.

It would not be in conformity to usage, of which Rules and Customs are the exponents, if they did not, like other great issues of the world, transcend even their own importance and come to be superstitiously regarded as unknown agents whose influences explain the actions of all things. It would not be like them if it did not break the seal of limits, overshadow science, and pass for what it was not.

Yet from this great species of fanaticism, dependent, as it is, upon the careless thinking of superficial observers, we would like to see discretion issue, and science separate. We would rather that diseases not be treated according to rules, that rational therapeutics master customs, and not play its subordinate, that the condition of the patient be the criterion for treatment, and empiricism be narrowed to its own limits.

It would be better if physicians did not *usually* give calomel while deciding the nature of a fever, or pursue the *usual* typhoid treatment in combating that disease. Strychnine might be given to relieve a flagging heart in typhoid fever, and not used at random because custom associates the drug with the disease. Quinine is not a panacea, and pepsin has a limit. All neuralgias have causes which are too diverse to be reached by single shots, and need enlightened treatment. Functional nervous diseases have names, and it is perversive of progress to say of a woman, "she has a nervous trouble." Continued study and attention to cases will avoid the necessity of ambiguous phrases, deceiving alike to ourselves and the public; and we can treat them from what we see, regardless of usages, rules and customs.

IODOFORM IN TUBERCULAR ARTHRITIS.

The treatment of tubercular joint affections by the injection, at intervals of one or two weeks, of a five per cent. emulsion of iodoform in glycerine or olive oil is a method that has, no doubt, come to stay.

With due care of the general health, fixation and, if possible, extension of the affected joint, combined with injections of this drug, the duration of these cases is no doubt shortened by half, while the prognosis is much more favorable. While it is a fact that by rest alone many cases recover, the per cent. of recoveries is greatly increased by judicious medication, and that drug, which, by its clinical excellence, appears to have a specific action on the tubercle bacilli, is the one that appeals to our minds.

That it has a specific action on this bacillus is argued both *pro* and *con* by well balanced men; but its clinical value is quite generally conceded by all. Used as an injection its action is probably local; yet great claims are made by some who use it as an inunction for its constitutional effect.

Iodin is doubtless the active principle. Granting that its action is not specific, it probably acts by exciting an active phagocytosis in the affected area, a property possessed, to a limited degree, by a few other chemicals.

The cases best adapted to this treatment are those in which the tubercular process begins in the synovial and cartilagenous structures of the articulation, because these parts are easier of access than the foci in the bony tissues.

For the emulsion, olive oil is greatly preferable to glycerine, as the latter is exceedingly painful when injected into a joint. From a half to two drachms of the mixture may be used in the knee joint; other joints in proportion to their size. A newly prepared emulsion should be used for the reason that in old preparations decomposition of the chemical has taken place to some degree, and is then so rapidly absorbed that it fails in its work and often gives toxic effects.

If this method is well carried out in properly selected cases the conservative treatment of tubercular joint affections will become more and more popular.

DELAY IN SURGERY.

The most potent factor that militates against successful surgery in general practice, especially in country work, is the procrastination attending the majority of cases that in their incipiency, to the practiced eye, are strictly surgical. The delay is only too often the result of a wrong diagnosis, but every operator knows full well that anatomical ignorance coupled with the stubbornness and unreasonableness of many self-styled conservative men constitutes one of the great obstacles to genuine, careful

surgery. A man who is often called by his *confreres* to operate *in extremis* soon learns the great difference between careful and conservative surgery, as no other man can. When a septicæmia, a gangrenous hernia, or a sympathetic opthalmia is imminent he cannot reconcile himself to the inactivity of the easy-going therapeutist, and he even suspects the latter individual of sordid motives. There are, no doubt, instances where the surgeon's judgment is obscured by his zeal, and then he is called a buccaneer; yet the results of modern surgery are so marvelous that each physician should at least be well learned in its possibilities, so that if he lacks the acute discriminative military habit necessary to a surgeon he may see the necessity of promptly calling a consultant.

We do not mean in those cases singular by their rarity of occurrence, but in the more common ailments. How often do we, at the present time, witness fatal cases of strangulated hernia, deaths that would not occur if common prudence was observed?

If arguments of ignorance delay these operations there is no answer in that particular case. Our only resource then is to more carefully educate those who are yet teachable and resign to time the task of relieving us of those who have never grown out of their student life, or who cling to a single experience of their career.

When the morbid process is constantly changing their conservatism remains unchanged, and with grave faces their trade mark "malaria" or "congestion" is written on their death certificates. They point with pride to a few who have survived the inky wave of death, but with the Greek philosopher, Bion, we ask what of the ones that were drowned?

CLINICAL VALUE OF THE MICROSCOPE.

To-day our greatest mechanical aid in diagnosis is the modern microscope. Every physician should possess an up to date instrument, and above all he should be master of it, not merely using it as a sinister office ornament.

Students who a few years ago took only an occasional glimpse through the microscope, now, when the art of medicine is being transformed into a science, find the instrument a bedside necessity to enable them to detect the one pathognomic symptom. Guessing on diagnostic symptoms is a practice rapidly fading away, as hand in hand the optical defects of the older instruments and the speculative instincts of our Anglo-Saxon origin are being overcome.

Our patients should not be led to think that they are being treated by machinery, for therein lies danger, yet they should be shown that their blood, urine, or sputum, can be examined at home, or the patient, with the pathological specimen, will eventually drift towards the metropolitan medical institution, and thus we would hear of more hospital abuses.

A certain bacteriologic and pathologic training in a laboratory is, of course, desirable to the intelligent use of the microscope, but the time consumed in acquiring this more exact science is only a trice of that required in the ancient lecture room where guessing and circumlocution were taught as fine arts.

Aside from the vast number of diseases yet shimmering through the lens, we have many whose recognition depends absolutely and some only in part on the microscope. Diseases of the blood are almost entirely diagnosed in this way. In disorders of the urinary, respiratory, and alimentary tracts, especially those affections of an infectious nature the great triumph of the microscope is manifest. It has also revealed the nature of neoplastic growths and rescued their treatment from the hands of quackery. It taught us the why and wherefore of a multitude of diseases, and in the rank and file of the profession we should find ten microscopes where at present we see but one.

SELFISHNESS IN MEDICINE.

It is well to say that selfishness is the same disturbing, degrading thing among other classes of men that it is among physicians.

Selfishness can neither be weighed, measured by a rule, nor given a value in dollars and cents.

Selfishness is a product, or more likely a part, of man's animal nature.

When one with a good picture of a physician's selfishness in his mind stands by the side of a hog-pen, and studies the manifestations of selfishness there, he can see no essential difference between selfishness in the hog, and selfishness in the physician. In both instances selfishness is in the end a cut-throat policy.

The study of medicine can hardly be looked upon as reformatory in its tendency, although it does in the main, and on account of the associations connected with it, inspire towards refinement; but a man who, if he had not read medicine, would have felt at ease in a pawnshop, is very apt, upon his graduation into the profession, to bring some ideas and instincts of a pawnshop level along with him. There is in most men, and in some physicians, something which goes out quickly towards a prospective gain.

To the average mind the reasons which present themselves as showing that the contemplated undertaking is a righteous one, have for their background the promise of a large gain for small risk and effort.

To physicians selfishness seems to prompt the bestowal of greater favor upon that project which exacts the most labor for a given amount of money, particularly if the bestowal of that labor works to the ultimate harm of the community generally and of the profession in particular,

For a long time selfishness in the oldest and best physicians had the swing in medical colleges and hospital dispensaries, and those physicians had the almost exclusive opportunity of making a reputation at the expense of the general profession.

After a time selfishness in other physicians took the hint from these men and began making a reputation for a few at the expense of the many, by doing railroad surgery for a pass over the road; lately though, it is said this selfishness is paid in some instances as much as $100 or $200 in addition to the yearly pass.

Other spheres for selfishness have been suggested by these two earlier ones, and many physicians now find a chance to make a living at the expense of the profession generally, by doing contract work at $1.00 a head a year.

This form of selfishness found the first soil in which it could grow in the medical college dispensary. The way to uproot the degrading thing is for each medical college to have a chair of Medical Ethics.

ARE EPILEPTICS RESPONSIBLE?

This medico-legal question is of more importance, possibly, than any subject with which expert testimony has to deal.

Its consideration involves the minutest study, and the most extended observation is needed to fit an expert for such duty.

The extent to which mind-control has been impaired by epilepsy, and the existence of epileptic insanity are questions to be decided in given cases.

Its symptoms are too unreliable, and its manifestations too varied to make it subject to the rules of either law or medicine; and the testimony of the competent medical expert is given with reference to the case before him, uninfluenced by ignorant statutes which fix the responsibility according to the knowledge of right and wrong possessed by the accused.

In every case where crime has been committed by an epileptic the vital point to be determined is the extent to which disease has impaired the brain functions—*the encroachment upon reason*; *the destruction of the controlling power of that particular mind.* It would be manifestly improper to exonorate a criminal simply because he was subject to this symptom of a disease. Equally improper would it be to condemn one because convincing symptoms of epileptic insanity had not been observed.

Theories in the abstract must give place to individual peculiarities, and we are to judge cases according to their own psychological aspects.

As a matter of interest in studying a case it may be well to pay attention to the source of the trouble, to ascertain its focal point, if it be possible; whether it is due to brain tumour, meningitis, lesions of the cortex, syphilis of the nervous system, or reflexly induced by irritations of non-nervous organs; though as matters of practical fact in shaping a case, such evidence will be inoperable. For we know that mental symptoms are not exclusively produced by lesion of any one part of the brain tissue—the old theory of the frontal lobes having been discarded—that "the psychological entity," the mind, may be reached through lesions of the cerebral cortex, medullar and other parts.

Psychological effects produced by epilepsy, irrespective of physical lesion are characteristic, somewhat in proportion to the regularity of the recurrences, that is, upon the active or passive state of the disease, as evidenced by repeated spells, depends the involvement of the mind. Each "fit" leaves the mind temporarily affected; rapidly succeeding ones then must permanently influence it.

This is important in fixing responsibility for crime.

That it is true, is too obvious to be argued, for we know that through the agency of the brain the mind functions are displayed, and that the exercise of those functions is dependent upon the state of that tissue.

Inversely, therefore, it is apparent, that *constant* morbid manifestations of the mind would be indicative of serious brain lesion, and indicative to the point of legal importance.

Irritability, stupor, moroseness, dreaminess, are attributes of epilepsy, and just here it would be proper to say that there is a no more constant phenomenon exhibited by subjects of this disorder than an *inability to govern themselves when subjected to even the slightest irritation.*

With the most trivial cause, and for the most inadequate offence, they will, at times, rise to the greatest limit of impassioned fury, transcending every point of the pro-

voking circumstances; and this too when there is not the slightest evidence of insanity; thus proving by this "paroxysmal burst of passion" the early sovereignty of the disease and its effect in overcoming and in incapacitating the mind-control.

That is epilepsy, and its control over the will power becomes more and more pronounced, as the disease advances. Epileptics frequently tell, after passing through one of these attacks—when some injury may have been done—of a knowledge upon their part at the time, that what they were engaged in was wrong, yet how that knowledge was subordinated to an influence which *impelled* them to the deed—an influence that we know to be epilepsy, however unscientific the expression.

It is said that all acts soon after epileptic spells are automatic, the patient is irresponsible. We know this to be true, from observed symptoms; and we know that even in the minds of those who have scarcely studied the subject at all, there exists an idea of modified responsibility where crime is connected with epilepsy.

As before stated, it is no part of this article to argue entire automatism upon the part of epileptics; to assert that overt acts in all instances are manifestations of the disease; or to insist that the mind is always in a suggestive state, receiving only such impressions as bear the stamp of epilepsy. But we do wish to call emphatic and especial attention to the mental state of epileptics, believing that only the most exhaustive scientific consideration can honestly deal with a disease whose presence deprives the cerebrum of its will; vitally affects the memory, and so ingratiates itself with reason as to inhibit every faculty of that master mechanism of the mind. Yet these radical changes are sometimes effected so insiduously that experts fail to detect them, and scientific men in recognizing such occurrences have originated the name of larvated, or concealed epilepsy, as expressive of the condition. Epileptic insanity is preceded by a history of epileptic seizures and is easily diagnosed. There are the characteristic facies, well described as consisting of a commingled suspicion, slight dreaminess and moroseness. Epileptics having reached this state will be seen to wander about vaguely, doing things of which they afterwards remember nothing. They are subject to violent outbreaks, and alienists believe that next to cases of transitory fury, the epileptic insane are the most dangerous of lunatics. Erratic losses of memory are peculiar to this form of insanity, and one of diagnostic importance.

Epileptic attacks coming before or after mental derangement are significant of epileptic insanity, and offered as testimony will usually be accepted as valid by the courts.

PROFESSIONAL SECRECY.

The physician comes into the closest and most sacred relations of life. He sees men and women in their hours of weakness, sees them when judgment and will are overthrown by disease, sees them when the intellect is so shattered and enfeebled by disease that its mastery is lost, and ignoble passions rule unchecked and unrestrained, and there is, therefore, an imperious necessity that he should be a man of sterling integrity and stainless purity—"chaste as unsunned snow."

The most delicate honor, the chastity of which is such that it feels "a stain like a wound" is as necessary to the true physician, as sunshine to the flowers of the field. The physician's confessional is not always one where secrets are wittingly revealed, but is often one where the dethroned intellect or the disorderd mind makes men and women reveal that which, else, no mortal ear had ever heard.

Things are heard by him, which the speaker would not have voluntarily given utterance to, though death were the penalty of silence. But not only does the physician hear what in health would have remained unspoken, for from many lips he hears voluntarily revealed secrets that the world should never know. He hears of infirmities that, if known, would bring his patient to infamy and shame; he hears that which if revealed, would destroy the peace of families and wreck many lives. He holds the same power over his helpless patient as does the butcher over his innocent victim:

"The lamb thy riot dooms to bleed to-day,
Had he thy reason would he skip and play?
Pleased to the last, he crops the flow'ry food,
And licks the hand just raised to shed his blood."

He holds often and often a greater power than that of death itself, for in his hands is the power to consign his patient to a fate a thousand fold worse than physical death.

The physician in whose mind dwells coarse thoughts, not only dishonors a noble profession and shames the traditions and history of a glorious past, but he also puts snares about his own feet, which sooner or later will be the means of "casting him headlong into a pit of destruction."

"Oh! what a tangled web we weave
When first we practice to deceive."

The life of a physician who is true to the ethical laws of his profession and to its tradition is a benediction, and he who lives

it crowns himself and those to whom he ministers, with unfading blessings.

"He that has light within his own clear breast,
May sit in the centre and enjoy bright day;
But he that hides a dark soul and foul thoughts,
Benighted walks under the mid-day sun."

The ethical principles woven into the mental and moral organization of men are like threads of gold woven into gross fabric, they remain bright and untarnished throughout all the years, while the base parts grow dark and moldy in decay. Men whose thoughts and actions are influenced by sound ethical principles are men whose virtues every one may see. To the true physician there is no greater pleasure than a consciousness of duty well done, and the heartfelt gratitude of suffering relieved of pain; and at last, when the pall spreads its velvet folds, and the sable plumes bow in stately gloom over his head, the earliest buds of spring will unfold their beauties over his last resting place, and there the sweetness of the summer's last rose linger longest. Though winter's chilling blast may lay them in the dust for a time "they shall surely bloom again." So may the soul that warmed the clay beneath them.

DISTURBANCES OF THE ALIMENTARY CANAL.

As August and September are upon us, and will soon bring with them their annual lot of disturbances of the alimentary canal, it will be worth each reader's while to look up the line of treatment that these particular maladies may call forth. Is it not true that perhaps in this disturbance we are more liable to fall into ruts in prescription writing than in any other direction?

It is so easy to prescribe a little chlorodyne, squibbs' mixture, or paregoric, and discharge the patient at least for that day. But there is more called for here than the careless prescribing of an opiate.

There are no series of cases which a careful diagnosis will do more for than those disturbances which are so prevalant in the gastro-intestinal canal during the late summer and early fall months; and unwise is he who ignores a careful scrutiny of each patient that is presented to him.

There never was a greater boon to mankind than the inauguration of opium for the relief of pain; and yet how many children's lives have been fairly puffed out because of the too early use of it in cases where evacuants should have had its place.

Diarrhœa, vomiting and pain are after all but symptoms of a disturbed state, and while they should demand our attention, yet our mind should not be divorced from the central cause and thus be treating only a symptom instead of the etiology of it.

Is it not a common mistake to place too much dependence upon medication and too little to the general habit and condition of the patient?

If he be an adult, does he bolt his food like a dog and let it digest as best it can; does he remember at this season of the year many of the fruits we most enjoy are liable to be over-ripe and in consequence are in a state of fermentation when eaten?

If it be an infant, the same law applies, but all the more rigidly, attention to the nurse is the prime thought. It matters little what medication we use, unless the diet is guarded and watched we can not help having misfortunes attend us.

It seems scarcely necessary for us to put in a word of caution relative to the prepared infant foods, and yet it is astonishing to know how many physicians are still suggesting them.

There is but one food for the infant. If breast milk can not be given, cow's milk (modified) can always be used. This is a broad statement, but one which can be borne out. Cow's milk properly prepared according to the age of the patient is the one food which should invite our attention. The mere fact that some babe has always been healthy and fat under a certain proprietary food is of no consequence as an argument. We can imagine some human beings who are able to eat thistles and still enjoy good health, but this is in spite of the thistles instead of because of it. Some infants, as well as adults, can bear much abuse and show little sign of it for the time, but the experience of the authorities is that children brought up under any other food than the breast milk or modified cow's milk, tend toward rickets. Many escape, of course, but the exception to general rules are poor guides to select.

All we desire, in writing these few lines, is to call the attention of the general practitioner to what he must face for the next few months, and would suggest the perusal of that splendidly written volume—The Diseases of Infancy and Childhood by L. Emmett Holt.

THE RECOIL FROM THE KNIFE.

The last decade or two may be termed the "heroic age" in surgery. The thorax, the abdomen, the pelvic cavity, the spine, the brain, even its ventricles have been invaded and entered boldly, not to say ruthlessly or recklessly, perhaps, and all in the laudible effort to relieve human suffering and to save life. Such remarkable success has attended many of these operations, and

such beneficial results have followed, that some *artists of the knife* have become overbold, and, we fear, almost reckless. So much is this so, that it would seem that men have vied with each other as to who should "beat the other's record," in the number of operations done.

The writer was consulted recently by a man in regard to his wife, whose ovaries had been excised a few months previously; the doctor stating at the time that she was the twenty-eight woman on whom he had done the same operation. The man was doing a general practice, was not over 35 years old, and had not more than an ordinary city clientage, when the boast was made. We certainly do not envy the man his conscience, or perhaps, rather, lack of it. It is inconceivable that woman's ovaries are in such need of removal, that in a general practice of ten or twelve years, twenty-eight such cases should fall to the share of one individual, under the circumstances named.

In the domain of obstetrics, there is probably less incentive to this modern spirit of emulation. However, many a babe has been sacrificed, the mother too succumbing in some instances, under the operation of craniotomy or symphysiotomy or cæsarean section, when this was the proper and only thing left to do, at the time, and under the circumstances then prevailing; the malformation of the pelvic structures making natural birth at the natural time very difficult or quite impossible. Modern advancement, however, is pointing out a better way and along more conservative lines. Present day facilities in examination and mensuration, in the use of the pelvimeter, reveal those deformities and malformations which absolutely necessitate a cæsarean or other operation, at full term; and this has suggested the wisdom of premature induction of labor and delivery. Within recent years there have been invented simple, inexpensive and efficient, incubators for the newborn, or rather premature-born, which makes this feasable and safe, and in the interest of both mother and child, as the old professors used to say. These prophylactic measures, if we may so speak of them, have been successfully carried out and are growing in favor. Dr. R. B. Gilbert, of Louisville, is a pioneer in this new departure. In 1894 he published in the "American Practitioner and News," a report of such a case of pelvic deformity which had resulted from a previous hip disease. An osteotomy of the femur, just below the trochanter, had been done, producing an oblique deformity and narrowing of the pelvis. Her first child, coming years afterward, the doctor states, had been delivered with forceps, "mutilated and dead, after many hours of hard and tedious labor." In her next pregnancy he brought on labor and delivered the babe, at six months and twenty days; and this was done "easily, and without the aid of instruments, and without the least injury to mother or child." The only inconvenience in such a case, is life in the incubator for a few weeks. But in this the child did well, and thrived, as also afterwards. No one for a moment hesitates to do this in danger from the kidneys, in the last few weeks of pregnancy; and in the instances we are supposing, the danger is as great as in eclampsia from uremia. Surely there has been found the better way.

TYPHOID FEVER.

With the advance of the summer season we are again brought face to face with the ever-recurring problem of typhoid fever. With the larger questions of prophylaxis and treatment of this disease, we do not at present proceed to deal, but we wish to call attention to a few minor details that have an important bearing upon the outcome of individual cases. There has been an unfortunate tendency throughout the Southern States to complicate all diseases with malaria and so construct, artificially, a hybrid nomenclature which impedes the true knowledge of disease. and interferes very seriously with its proper treatment. In no case is this more apparent than in typhoid fever. Everywhere one hears of the occurrence of typho-malarial fever, which term is used to mitigate the terror of a community in which typhoid has become endemic, or to cover up the ignorance of the practitioner who cannot make a proper diagnosis. That typhoid fever, due to the development of its own specific organism in a person already infected with one, or several, forms of malarial intoxication, may complicate true malaria, need not be denied, but it is an accident of simultaneous occurrence, not of connected development. For purposes of diagnosis Widal's serum test of typhoid blood will assist materially, and also the microscopic examination of fresh blood for the malarial organism; but these means are not at the disposal of every one. Let it then be remembered that, in the matter of malaria, a diagnosis, very nearly positive, can be made by treatment with quinine. If the drug be of good quality, an immediate improvement will follow its exhibition. Some forms of the malarial organism are not entirely destroyed by its use, and will in time, if it is not continued long enough, reproduce themselves and their usual train

of symptoms; but all forms of the disease are vastly improved from the first dose of the drug. This simplifies the matter very much, and enables us to say that quinine, if of benefit, may be expected to show its effect very promptly.

Another point. We believe that in true typhoid fever no benefit will follow the use of quinine; on the contrary, its prolonged use, after its inefficiency has been demonstrated, is rather hurtful than useful. This we have seen again and again, before we accepted the clear division insisted upon. Those enormous doses of quinine that have been given throughout the three or more weeks of "typho-malarial" fever have been absolutely useless, or indeed deleterious, to the sufferer. Of the means of reducing temperature in typhoid fever, we need not speak here, but certainly quinine in large doses, as recommended, should never be included in the list. If the patient should have a double infection, by accident, then enough quinine to destroy or hold in check the malarial organism may be allowed, but little will be required, and for this distinct purpose only. So make a careful diagnosis of each case and treat it properly, either it is malaria, when quinine will promptly check or cure it, or it is typhoid fever, calling for its own appropriate treatment, or it may be some other disease that is overlooked by the careless diagnostician, but it is never "typho-malarial" fever, for there is no such disease. We offer these few consideration to our friends of city and country as appropriate to the season, in hope that some, who have been careless in the past, may be stirred up to a greater accuracy of observation and a more careful habit of diagnosis, when, we are sure, our views will become similar.

PROFESSIONAL OBLIGATION.

Amid all the wide range of subjects that present themselves to the medical man for consideration, thought or expression, none so seemingly neglected, yet none so impresses me with its magnitude, worth, excellence, weight and importance as that of *professional obligation*. The duties incumbent upon us as physicians are not those alone, that suffering humanity requires at our hands, but the principles of justice, right and a scriptural injunction, demands of us a far nobler, higher, loftier, grander and more generous and kindred feeling; one that should actuate us in all our professional intercourse with each other—a spirit of professional obligation. We should ever remember that our calling is the highest, the greatest, the grandest, the noblest of all vocations or professions vouchsafed to mankind by an all-wise and benificent Creator.

Into our hands, by our calling, He hath committed and commended the most sacred trust—a human life. Upon our sense, judgment, discretion, discernment, wise discrimination and intuition depend in a great measure its comfort, care, welfare, preservation and perpetuity. That trust, so great, so sacred, by us should be carefully guarded, nurtured, defended, and wisely and intelligently protected.

Then, as the obligations devolving upon us are so great, the demands so requiring and exacting at our hands, it behooves us as physicians to unite ourselves in a fraternal bond of union, of fellowship and brotherhood, to let that fellowship be so created within us, and by us so cemented, nurtured, cherished and matured that as professional men, men loving justice, we may unbiasedly, unselfishly, and unreservedly, help to bear the burdens of each other, "to feel a brother's care." Or in the language of the poet:

> "Teach me to feel another's woe,
> To hide the fault I see;
> That mercy I to others show,
> That mercy show to me."

How sacred should be that tie of friendship, which binds the physician to his fellows, no one can know or feel until experience has taught the lesson and left its impress indellibly engraven upon the heart and memory by a life-time of toil, of care, of privation, of want, of anxiety, of perplexity and a hundred other ills consequent upon, and the attendants of, his professional life. Unhonored and unsung must he commence the struggle for recognition and maintenance, for conquest, defeat or victory. Years of poverty, years of severest toil, years of study, onward must he go midst heat and cold, midst storms of adversity, with but an occasional gleam of sunshine to cheer him along life's rugged thorn-strewn pathway; uncompensated, unappreciated, a mendicant, a slave, as it were, to obey the behests, commands, dictates and calls of every one, however ungenerous, unappreciative, or ignoble, and life itself may prove the sacrifice in the discharge of his professional duties; yet few be the sympathetic tears that glisten and fall at the demise of such a martyr; no flowers strew the grave from the hands of those he periled and lost his life to save. To whom then must we look, aye, from whom expect condolence, sympathy and a just regard, if not from those who travel the same rugged, thorn-strewn pathway, if not from our own brotherhood, who by sad experience have

been taught these terrible truths. The duties and obligations, no man, at least a member of the medical profession, who should be endowed with ordinary intelligence, need be misguided or misdirected; neither need he misinterpret or misunderstand his professional obligations to his brethren. It may all be summed up in one biblical injunction—"Do ye unto others as ye would that others should do unto you."

"Count life by virtues; these will last
When life's lame, foiled race is o'er:
And these, when earthly joys are past,
Shall cheer us on a brighter shore."

Remember, brethren, when called upon to share the burdens of your fellow practitioner, when in the hour of his utmost extremity he most needs your counsel, your admonition and kindliest advice, then it is a word, a look, a gesture, or a mere sign of disapproval that may sink the poor confiding victim beneath a load of obloquy, censure and approbrium that time cannot efface, merit obliterate, nor the apologies or regret of the offender repair the injury inflicted. The physician's reputation is his capital. Destroy his reputation and he becomes a bankrupt professionally. How forcibly and beautifully is this thought presented by the immortal "Bard of Avon," when in Othello he makes that serpentine character—Iago (the darkest character found anywhere in his writings, whose very soul was black as night) say:

"Good name in man and woman, dear my Lord,
Is the immediate jewel of their souls;
Who steals my purse steals trash; 'tis something, nothing;
'Twas mine, 'tis his, and has been slave to thousands:
But he that filches from me my good name
Robs me of that which not enriches him
And makes me poor indeed."

FRACTURE OF LOWER JAW.

Having seen two cases of fracture of lower jaw, and both attended with a great deal of trouble and time in attempting to keep the parts in place by using both plaster of paris splints and leather splints. I was pleased to note the following, and in the next case I shall gladly try after the former irksome experience.

Mahe (Revue de Chirurgie, Oct. 1897) advocates very strongly the use of Kingsley's apparatus in cases of fracture of the lower jaw. This consists of a dental splint of vulcanite rubber, to which are attached two curved arms of steel, which, emerging from the mouth, extend over the cheek to the angle of the jaw on either side. These are fixed by a string of gauze passing beneath the chin from one arm to the other. This apparatus, which was devised about twenty years ago, has been applied with complete success by Mahe, who states that by its simplicity, and the ease of its construction, by the slight amount of discomfort it causes, by the freedom it affords to the temporo-maxillary articulation, and consequently, the possibility it permits of an almost normal alimentation, and by the perfect apposition of the fragments, it assumes, undoubtedly constitutes a method of rendering marked service in most, if not all, of the cases of fracture of the lower jaw. (British Medical Journal, Sept. 30, 1897).

Fracture of the lower jaw rarely ever occurs at the symphysis and the tilting of fractured ends are hard to manage from an outside support. The above method presents itself as the most feasible of any description for treatment of fracture of lower jaw I have ever been able to find.

BOOK REVIEWS.

A MANUAL OF MODERN SURGERY—General and Operative. By JOHN CHALMERS DACOSTA, M. D., Clinical Professor of Surgery, Jefferson Medical College, Philadelphia; Surgeon to the Philadelphia Hospital, &c. Philadelphia: W. B. Saunders, 925 Walnut Street. 1898.

This is a very excellent manual. It presents in clear terms and in concise form the fundamental principles, the chief operations, and the accepted methods of modern surgery. The work stands between the complete but cumbrous text-book and the incomplete but concentrated compend. Obsolete and unessential methods have been excluded in favor of the living and the essential. In this the second edition there have been no alterations in the character or the purpose of the manual, although it has been practically rewritten, many new articles added, and a majority of the old articles enlarged, restricted or otherwise altered. Among the changes may be mentioned the following: Sections have been added upon the Surgery of the Liver and Gall Bladder, the Spleen and Pancreas, the Female Breast, Wounds Inflicted by Modern Projectiles, Electrical Injuries, and the use of the Rontgen Rays. The following operations have been described: Resection of the Gasserian Ganglion; Methods of Gastrostomy; Schede's Operation of Thoracoplasty; Use of the Murphy Button; various new methods of Enterorhaphy; Bodine's method of Colostomy; Prevention of Hemorrhage in Hip-joint Amputation by Macuwen's meth-

od of Aortic Compression; Edmund Owen's Operation for Harelip; Senn's method of Resection of the Shoulder-joint.

The opening chapter is devoted to Bacteriology, because without some knowledge of the vital principles of this branch of science the vast importance of its truths will be ill-appreciated, and there will be inevitable failure in the application of aseptic and antiseptic methods. In orthopædic surgery are discussed those conditions which must, in the very nature of things, often be cared for by the surgeon or the general practitioner. A large amount of space has been devoted to Fractures and Dislocations. Operative Surgery is considered in separate sections, the most important procedures being fully described, giving also the instruments necessary, and the position assumed by the patient and operator. There are many other features of the work that deserve meritorious mention. It contains 911 pages, printed and bound in the usual high class style characteristic of the publishers. We know of no book that will serve a more useful purpose.

A Practical Treatise on the Diseases of Women and Their Treatment by Electricity. Third Edition, Revised, Rewritten, and Greatly Enlarged. By G. Betton Massey, M. D., Physician to the Gynecic Department of Howard Hospital, Philadelphia; Late Electro-Therapeutist to the Infirmary for Nervous Diseases, Philadelphia; Fellow and ex-President of the American Electro-Therapeutic Association, of the Societe Francaise d'Electrotherapie, of the American Medical Association, etc. Illustrated with Twelve Full-Page Original Chromo-lithographic Plates in Twelve Colors, Numerous Full-Page Original Half-tone Plates of Photographs taken from Nature, and many other Engravings in the Text. Royal Octavo. 400 pages. Extra Cloth, Beveled Edges, $3.50 net. The F. A. Davis Co., Publishers, 1914-16 Cherry Street, Philadelphia; 117 W. Forty-second St., New York City; 9 Lakeside Building, 218-220 S. Clark St., Chicago, Ill.

This work was originally entitled Electricity in the Diseases of Women, but this volume has been transformed into a Treatise on the Medical and Surgical Diseases of Women, with special reference to the therapeutic use of electricity. This broadening of the scope of the work has been made necessary by the fact that nearly all of the moderu treatises on gynecology have been written from a purely surgical standpoint, leading often to a perspective view of these affections that unduly exagerated the mechanical side of pelvic pathology. The writer does not lay any claim to this volume as a treatise on the diseases of women, in that it covers the field so ably occupied by the works on abdominal and pelvic surgery alluded to, but only that it covers ground of more value to the average physician and his patient than books devoted to the details of operations that, however necessary at times, are often only properly of service as last resorts, and are then incapable of application except at the hands that have had more than a book training.

The material in this volume is the very latest advances upon this subject, and deals much more fully than heretofore with the nature and causation of the diseases of women in which electricity is urged as a rational remedy, as well as discussing in detail the many minor points which are essential to success in its employment. The work is well written. The different subjects herein treated are very full and complete. We would call special attention to the section accorded fibroid tumors and their treatment by the Apostoli method, and to the author's method for the treatment of cancer.

The cuts and illustrations found in this volume are probably the best we have ever seen. The printing is superb and the binding excellent, making the volume a handsome as well as a most useful one.

A System of Practical Medicine. By American Authors. Edited by Alfred Lee Loomis, M. D., Late Professor of Pathology and Practical Medicine in the New York University, and William Gilman Thompson, M. D., Professor of Medicine in the Cornell University Medical College, New York. In four imperial octavo volumes. Volume IV.—Diseases of the Nervous System and Mind: Vasomotor and Trophic Disorders: Diseases of the Muscles; Osteo-Malacia; Rachitis: Rheumatism; Arthritis; Gout; Lithæmia: Obesity; Scurvy; Addison's Disease. 1099 pages, 95 engravings, and 8 full-page plates in colors and monochrome. For sale by subscription. Per volume, Cloth, $4.00; Leather, $6.00; Half-Morocco, $7.00. Lea Brothers & Co., Publishers, Philadelphia and New York. 1898.

The issuance of this volume completes a great work and one of which America can well be proud as adequately representing the advanced state of medical science in this country towards the close of the nineteenth century. The time was clearly ripe for such an enterprise, as a number of progressive years had passed since the publication of the system of medicine by Pepper. Prof's. Loomis and Thompson have succeeded in securing precisely the right class of contributors, namely, the busiest and

most experienced men, those who find it most difficult to divert from practice the time necessary for writing. The creation of a library of medicine in four convenient volumes was a problem requiring the most careful judgment in plan and execution, and it has been well worked out. The first article in this installment is one by Dr. Frederick G. Finley, in which the difficult subject of Diseases of the Peripheral Nerves is carefully and lucidly dealt with. Details are elaborately and accurately set forth and many new methods of treatment are described. The diagnosis and localization of spinal cord are described in an interesting and philosophical manner by Dr. M, Allen Starr.

The important article on acute spinal meningitis has been entrusted to Dr. Christian A. Herter, who has successfully managed the difficult task of making it sufficiently full without rendering it unwieldy. Dr. Christian A. Herter also writes on Diseases of the Blood Vessels of the Spinal Cord. A very complete and interesting chapter on Water in Poliomyelitis is given by M. Allen Starr, M. D. Several good illustrations accompany the chapter. That well known writer and teacher Dr. Edward D. Fisher furnishes us a most excellent treatise on Acute and Chronic Myelitis; Landry's Paralysis.

The chapter on Posterior, Primary, Lateral and Postero-Lateral Spinal Sclerosis is written by Dr. D. D. Stewart in his accustomed scholarly style. There is no chapter in the volume more complete and elaborate. Syphilis of the Spinal Cord; Tumors of the Spinal Cord; Syringo-melia; Malformations of the Spinal Cord, are the titles of interesting articles by Dr. Christian A. Herter. Diseases of the Medulla and Pons by Dr. Herter is also concise and complete. Diseases of the Brain is described by Dr. J. T. Eskridge in a masterly fashion as might be expected from his thorough researches. His style is clear and illustrations good. There are many other sections in the work that much time could be given to in review, that are of equal importance and interest. In the closing chapters we would not fail to note the highly interesting and philosophic manner in which the difficult subject of Gout is treated in the editor's hands.

The concluding chapter is written by Dr. Warren Coleman on the subject of Addison's Disease. This brings to a conclusion the Fourth volume, which more than maintains the high standard of excellence of the earlier volumes, and reflects the highest credit alike on the editor, and on his distinguished contrtbutors.

INTERNATIONAL CLINICS. A Quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynæcology, Obstetricts, Opthalmology, Laryngology, Pharyngology, Rhinology, Otology, and Dermatology, and Specially Prepared Articles on Treatment and Drugs. By Professors and Lecturers in the Leading Medical Colleges of the United States, Germany, Austria, France, Great Britain and Canada. Edited by JUDSON DALAND, M. D., (University of Pennsylvania), Philadelphia; Instructor in Clinical Medicine and Lecturer on Physical Diagnosis in the University of Pennsylvania; Assistant Physician to the Hospital of the University of Pennsylvania, etc.; Fellow of the College of Physicians of Philadelphia. J. MITCHELL BRUCE, M. D., F. R. C. P., London, England, Physician to, and Lecturer on, the Principles and Practice of Medicine at the Charing Cross Hospital. DAVID W. FINLAY. M. D., F. R. C. P., Aberdeen, Scotland, Professor of Practice of Medicine in the University of Aberdeen; Physician to, and Lecturer on, Clinical Medicine in the Aberdeen Royal Infirmary, etc. Volume II. Eighth Series. 1898. Philadelphia: J. B. Lippincott Company.

In this volume there is one lecture under the general head of drugs and remedial agents, seven lectures under Treatment, nine lectures under Medicine, two lectures under Neurology, eight lectures under Surgery, four lectures under Gynecology and Obstetrics, three lectures under Ophthalmology, one lecture under Laryngology, and one lecture under Dermatology—the total of these lectures are well destributed among the important departments of medicine and surgery.

The authors are well known and of considerable experience, and some of them of conspicuous eminence. The book is constructed on similar lines to its predecessors, and is an interesting and useful addition to the physician's library.

THE AMERICAN ECLECTIC MATERIA MEDICA AND THERAPEUTICS. By JOHN M. SCUDDER, M. D., Late Professor of the Principles and Practice of Medicine in the Eclectic Medical Institute of Cincinnati; Author of the Eclectic Practice of Medicine, the Principles of Medicine, Diseases of Women, &c., &c. Twelfth Edition. Cincinnati: The Scudder Bros. Co., Publishers. 1898.

The appearance and exhaustion of edition after edition of this materia medica bespeaks in more emphatic terms than words of the popularity it has taken upon both students and practitioners. The author states in the preface that whilst there have been great advances in the science of medicine, espe-

cially in therapeutics, since this work was first issued, the author deems it of importance to the profession that the old remedies and old methods should be kept in view. The practitioner needs to renew his acquaintance with them from time to time, that he may loose nothing good of the old practice, and that he may clearly trace the connection between the old and the new. The student requires it, that he may attain a complete knowledge of therapeutics and materia medica. The work is divided into two great divisions: Part I. treating of General Therapeutics, under which is considered methods of cure, disease, law in medicine, actions of medicine upon the system, art of prescribing medicines and the preparation of remedies. Part II. Special Therapeutics, under which is given the eliminatives, emetics, cathartics, diaphoretics, &c., taken up in their proper order. The author gives a description of the drugs, with their indications, dose and therapeutic action in a most concise and clear manner. The work contains 748 pages, printed on good paper and well bound. The author has brought forth a very laudable and instructive work, and one that will find a place in many libraries.

A Compend of Diseases of the Skin. By Jay F. Schamberg, A. B., M. D. Philadelphia: P. Blakiston's Son & Co.. 1012 Walnut Street. 1898.

Students always find these compends of great help, especially in time of examinations, and physicians will find them of easy and quick access in case of reference. This volume presents the subject of skin diseases in a succinct and at the same time lucid and readable form. Especial attention has been paid to the differential diagnosis and treatment of the more important affections. The compend contains many very excellent cuts and plates. The volume is well printed and neatly bound.

An Illustrated Flora of the Northern States, Canada and the British Possessions. By Nathaniel Lord Britton, Ph.D., and Hon. Addison Brown. In three Volumes. Vol. III. Apocynaceæ to Compositæ, Dogbane to Thistle. New York: Chas. Scribners' Sons. 1898.

This is the third volume of the most complete illustrated Flora published in this country. It illustrates and describes every species from the Dogbane to Thistle. This work serves as an independent handbook of Northern Flora and as a work of general reference and as an original and supplement to the manuals of systematic botany in current use. The volume contains 588 large pages, profusely and handsomely illustrated and to the botanical student a most useful and an indispensable work.

Transactions of the New York State Medical Association for the Year 1897. Vol. XIV. Edited for the Association by E. D. Ferguson, M. D. Published by the Association, 64 Madison Avenue, New York City.

This excellent report of the transactions of this Society is a credit to the members, and an addition of decided merit to literature. This Association is an active, progressive and scientific body of physicians, all of which is indicated by the character of work done at its annual meeting and properly recorded in its yearly volume of transactions. Dr. Douglas Ayres of Fort Plain, Montgomery county, is President, and Dr. E. D. Ferguson, of Troy, is Secretary and Treasurer. The volume comprises nearly 700 pages. It contains numerous excellent papers with elaborate discussions. Near the close of the Transactions is found the memoirs of William Thompson Lusk, M.D., and J. Lewis Smith, M. D., with photos. These transactions are always good, and the present one is no exception.

Transactions of the Vermont State Medical Society, 1897. Published by the Society.

The transactions form a very neat volume of 221 pages, well bound and nicely printed. It contains several excellent papers with full discussions. Among the articles we mention the one on carcinoma of the Female breast, by Dr. M. D. Warren, and the Modern Management of Diphtheria and Croup Cases, by Augustus Caille. Dr. D. C. Hawley is Secretary of this Association.

LITERARY NOTES.

Lippincott's Magazine for August, 1898.—The complete novel in the August issue of Lippincott's, "The Last Rebel," is by Joseph A. Altsheler, now known as a writer of war stories. The scene is a lonesome post in the southern Alleghanies, held for the Confederacy by a chivalrous monomaniac after the unpleasantness of 1861–65 had ended. The action deals with the experiences of a northerner who unadvisedly wandered into those parts and found himself a prisoner.

Tudie and "Misery," as described respectively by Alice Miriam Roundy and Elizabeth F. Tittle, were girls of extremely diverse situation and fortune; one of them lived in Colorado, the other in a wild part of Pennsylvania. Edwin A. Pratt and John Ford Barbour narrate, in the characters

of hero and heroine, the amatory exploit of "A Fortune-hunter.

The prospects of "The United States as a Colonial Power" are considered by Fred. Perry Powers. He thinks that this is our manifest destiny, and that by reforming our politics and putting only fit men in office we can discharge our new duties creditably. George J. Varney writes of "Signalling in War-time," and George Ethelbert Walsh of "Privateers."

Two articles appropriate to the season are "Death in the Woods and Fields" by Calvin Dill Wilson, and "Summer Loggin" by Allan Hendricks; each is the outcome of personal observation and knowledge.

A bit of old frontier history is given by Elizabeth Wormely Latimer under the title "In Ohio a Hundred Years Ago." It epitomizes the advantures of Charles Johnston, for some time prisoner among the Indians, as recorded by him in 1827.

Vance Thompson furnishes some leaves out of his book as "The Police Reporter" of Sundry newspapers. Annie Steger Winston writes pleasantly of "The Democracy of Fiction," and considers Scott the most truly democratic of novelists.

The poetry of the number is by Celia A. Hayward, Julia Schayer, Helen Gray Cone, Carrie Blake Morgan, Grace Shoup, and Grace F. Pennypacker.

The American Monthly Review of Reviews for August reviews the Santiago campaign by land and sea from start to finish. Winston Churchill, who wrote so acceptably on Admiral Dewey for the June Review, describes in this number the wonderful battle with Cervera's fleet, and this article is illustrated in parts from Hemment's remarkable photographs of the Spanish ships taken the day after the fight. John A. Church, formerly of the Army and Navy Journal, contributes a full account of the Santiago land fighting, and his article also is illustrated from new photographs. Park Benjamin writes on the work cut out for the Eastern squadron under Commodore Watson. Altogether, the Review again shows its ability to keep well abreast of all important military and navy movements, and to exhibit a clean pair of heels to all its competitors in magazinedom.

Sir Henry Irving's lecture on The Theatre in its Relation to the State, delivered at the University of Cambridge June 15, is reproduced in full in The Living Age for July 30. No one could be more competent than the distinguished actor to treat such a subject.

The War leads the July number of Scribner's Magazine. No one saw its beginnings under more favorable circumstances than Richard Harding Davis. As correspondent of the London Times he was accorded every privilege, and was for weeks on the flagship "New York." His account of "The First Shot of the War" and "The First Bombardment" is the graphic picture of what an eye-witness saw when the "Buen Oentura" was taken and Matanzas was bombarded. His pre-eminent faculty of making real to the imagination what he has seen was never afforded a better opportunity. How it feels to be on a great warship in action is made vivid. Snapshot photographs by Mr Davis add to the sense of reality. "The ship seemed to work and to fight by herself," he says, "you heard no human voice of command."

Mr Davis will write for no other magazine about the War, and his articles will be a retrospective narrative of its most dramatic features, with abundant illustration.

King's American Eclectic Dispensatory.—New edition. Entirely re-written and enlarged, by Harvey W. Felter, M. D., Adjunct Professor of Chemistry in the Eclectic Medical Institute, Cincinnati, Ohio; Co-editor Locke's Materia Medica and Therapeutics; President Ohio State Eclectic Medical Association; etc., etc., and John Uri Lloyd, Ph. M., Professor of Chemistry and Pharmacy in the Eclectic Medical Institute, Cincinnati, O.; formerly Professor of Pharmacy in the Cincinnati College of Pharmacy; Ex-President of the American Pharmaceutical Association; Author of the Chemistry of Medicines; Drugs and Medicines of North America; Etidorpha; etc., etc., Two volume edition, royal octavo, each volume containing over 950 pages with complete Indexes. Cloth, $4.50 per volume, postpaid. Advance subscriptions received by the Scudder Brothers Co., No. 1009 Plum St., Cincinnati, Ohio, General Agents.

The Gonococcus and Its Toxin.

J. de Christmas, says the American Medico-Surgical Bulletin, has presented a series of observations upon the gonococcus of Neisser, its toxin and also an antitoxin: The organism is grown upon a mixture of ascites-serum and broth-peptone in proportions of one to three, in an incubator at 36 deg. C. In this mixture the gonococcus grows rapidly and develops its gonotoxin.

Experimental inoculations in great numbers were made upon various animals with

uniformly successful results. In man the author has been able to induce an urethritis resembling gonorrhea in all its important characteristics save the gonococci—these were absent.

A number of experiments were made upon animals, with a view of obtaining an antitoxin; this the author thinks he has accomplished. The animal rendering the antitoxin was the goat, and the author concludes by stating that the antitoxic properties of the serum thus far obtained is insufficient to arrest in its progress an attack of gonorrhea in man, but he believes that it is capable of exercising a restraining effect upon a number of the gonorrheal infections, such as blenorrhagia, arthritis, and salpingitis.

Prevention of Shock.

Dr. Hugh M. Taylor, of Richmond, Va., at the International Association of Railway Surgeons, said:

In order to facilitate the discussion of this phase of the subject it would be well to notice first, Shock induced by mental impression; second, Shock incident to trauma, i. e. fractures, dislocations and extensive contusions and lacerations; third, The preventive measures indicated prior to, during, and subsequent to an operation.

While we must admit our inability to prevent the mental impression which culminates in profound shock and later in the so-called traumatic hysteria or neurasthenia, he would urge that it may be within the surgeon's power to limit the degree and duration of psychical shock. Just as we educate the non-traumatic neurasthenic to realize that they are not hopelessly sick and finally are well, in like manner he thought, we can certainly, in some instances, by words of encouragement, remove the idea in the mind of the injured that the injury is serious or lasting. This idea was probably common experience and its emphasis out of place, but since appreciating it fully, he was of the opinion that he had lessened suffering and in railroad cases, especially, had sent men back to their work earlier and had possibly avoided some troublesome suits for damages.

In the prevention of shock incident to trauma, he thought our efforts must largely be directed to limiting the extent and duration of shock. Notably the railway surgeon usually finds his patient shocked when he first sees him, and his interest is largely focused in limiting existing shock and in preventing added shock. The inquiry naturally arises what are the preventive measures at our command available in traumatic cases to limit shock, to prevent it; increase and continuation?

Assuming that mental disquietude, pain, hemorrhage and sepsis are the most important etiological factors in inducing shock, it seemed most important to reassure the alarmed patient, relieve pain, prevent hemorrhage, or remedy its consequences, and to guard against sepsis. Words of encouragement were, he thought, potent for good and he would impress the benefit incident to the timely administration of morphia to relieve the pain. Morphia, he thought, did good, not only by relieving pain (an important factor in inducing shock) but he also regarded morphia as one of the best of heart tonics. He recalled the fact that the anodyne effect of morphia is not indicated in all cases, as pain is not severe in proportion to the gravity of the injury. He had often seen a mashed finger attended by excruciating pain and profound shock, while in a case of a penetrating wound of the abdomen, even with visceral lesions, there may be little pain and in some instances no shock.

Some of the speakers had disapproved of the tendency to confuse the effects of hemorrhage with those of shock. For his part, he thought the conditions, i. e. the effects, of shock and hemorrhage were so closely related that they should be considered together. He thought we could claim to have shock in all cases of profuse hemorrhage, i. e. the shock of hemorrhage, and possibly hemorrhage in all cases of profound shock, this last being true if we admit in shock and vaso-motor paresis, we have the blood accumulating in the pelvic and abdominal vessels—the patient bleeding even to death into his own blood vessels. He certainly could not agree with some of the previous speakers who failed to recognize in hemorrhage, a most important and frequent cause of shock. He thought the shock of hemorrhage was just as much shock as the shock incident to depressed fractures, or that from a ptomain poison from any source. The symptoms of shock and those of hemorrhage are the same, and there are no clinical features by which we may tell the syncope of shock from that due to hemorrhage, and no changes other than those ocular demonstrations by which we can differentiate the effects of shock from those of hemorrhage.

Shock, syncope and collapse were terms which he used synonymously and each represented to him the condition of shock. To claim that the depression incident to hemorrhage was collapse or syncope and not shock was to his mind a distinction without a difference and as such was misleading

and unfortunate. He would urge that the most important mission of the surgeon is to secure hemostasis and prevent or remedy its inevitable sequelæ—shock. Shock without hemorrhage is common, but hemorrhage without the shock of hemorrhage is rare, and in minimixing hemorrhage, he thought, we prevent shock and limit its intensity and duration. While the contused and lacerated wounds, the type met with so frequently by railway surgeons, do not as a rule bleed profusely, he would ask if there were not many exceptions to this rule, and is it not a fact that not infrequently the patient has bled to syncope before he is seen by the surgeon, and that shock, nature's most potent hemostatic, has checked the bleeding? Often there is no bleeding at the time when the patient is first seen, but he is shocked and it is eminently undesirable that shock should be added to shock by even a limited continued bleeding.

While not wishing to consider the technique best adapted to secure hemostasis and remove its consequences, experientially he could endorse, most emphatically, the value of normal saline solution administered per rectum, subcutaneouly, or directly into the vein. It is the remedy in which he has the greatest confidence, and he has used it freely and satisfactorily in the shock incident to trauma, hemorrhage, and in cases of post operative traumatic and puerperal sepsis. In connection with the use of saline transfusion after trauma, he would recall the fact that the saline will pour out of open blood vessels almost as fast as we can introduce it into the circulation, and therefore in conjunction with its exhibition we must close up vessels from which it could escape.

As an illustration, in a compound fracture of the skull with profound shock, the saline solution introduced into a vein in the arm immediately poured out of the skull wound, through a torn longitudinal sinus. Of course the patient was not benefitted by transfusion. In another instance, a patient with his leg crushed off had also a torn perineum. Profound shock existed and transfusion direct was at once practiced. A tourniquet on the mangled leg sufficed at that point, but in spite of tight packing of the wound in the perineum with gauze, in a few minutes the saline solution was found puddled between the patients thighs and of course no benefit was derived.

Another point in connection with the use of saline transfusion which he thinks he has observed sufficiently often to warrant mention, is that the free use of saline transfusion, post-traumatic or post-operative, increases the amount of discharge from wounds. He has specially noticed this increase in connection with drainage after intra-abdominal operations, and it may be of service in diluting septic material and in flushing septic areas which we wish to drain. An effect of interest and value incident to saline transfusion is its power to relieve thirst, to stimulate the action of the kidneys, skin and bowels, and the elimination of ptomain and other poisons.

He thought it was often a nice point to decide when to operate during shock, to arrest hemorrhage or to prevent its recurrence with the advent of reaction. In his experience, instances are not infrequent when operative interference was imperative to arrest hemorrhage and increasing or recurring shock incident to hemorrhage.

Very recently he had met with two cases which fully illustrated this point. One was a penetrating pistol wound of the abdomen, with visceral lesion in the shape of a perforation of the stomach and liver. An hour after the injury there was but little if any appreciable shock. Three hours after, in spite of active preventive treatment the patient was collapsed. Shocked presumably from intra-abdominal bleeding. A section revealed the lesions mentioned and free intra-abdominal hemorrhage. A second case occurred in connection with a celiotomy for pyosalpinx and adherent appendix. The patient was put to bed in apparently good condition. An hour subsequently the patient's pulse was 110 deg.: in two hours it was 130 deg. and accompanied by the usual manifestations of profound shock. On re-opening the abdomen, free hemorrhage was found to have taken place from a tear in the broad ligament.

He thought one of the most perplexing problems that we are called upon to solve, especially in abdominal and thoracic injuries is to decide whether the shock is due to trauma *per se* or to trauma plus intra-abdominal or intra-thoracic bleeding. While in hemorrhage we should have the symptoms of shock plus the pressure symptoms of accumulated blood, he doubted if many could appreciate the pressure symptoms by the physical signs early enough to be of service. The differentiation is best made, he thought, by remembering that shock is, as a rule, immediate in its outset and reaches its acme at once, and in the absence of a continued causative influence, is not progressive or lasting beyond reasonable limits,

The shock, syncope or collapse from hemorrhage is slower in its outset, often begins with or after reaction from the primary shock, and is progressive or recurring in character.

In connection with prevention of shock he thought we might well consider the ad-

vantages and disadvantages incident to transporting patients to hospitals while suffering from shock. Added pain, continued bleeding, and the danger of infection through cutaneous or visceral wounds are prominent among the disadvantages of removing injured patients. The strangulated hernia, the mangled limb, depressed skull, and torn abdominal viscera had often, he thought, best be operated on at once, and if need be, sent to the hospital for subsequent treatment.

What can we do to prevent shock if we have time to prepare the patient for the operation? When such opportunity is afforded he thought a great deal could be done to prevent shock. Whenever possible the preparation of a patient for a major operation should begin several days prior to the time fixed for the operation. If the patient is to go to the hospital, he thinks it is a decided advantage to have the patient in the hospital for at least forty-eight hours prior to the operation. Few patients, unaccustomed to hospital life rest quietly for the first few nights of their sojourn in the hospital, while in a few days they get used to the hospital, nurses, etc. Whether the operation is to be performed at home or in a hospital, the surgeon can usually profitably occupy several days in ascertaining the weak points in his patient's physique and in doing all in his power to improve the resistance of individual organs, and of the organism as a whole. Many a post-operative crisis is, he thinks, successfully passed by the careful preparation given prior to the operation, Notably the morale of the patient should be encouraged. The patient who goes to the operation, full of courage as to the result, confident of recovery, expecting freedom from pain and restored usefulness, is probably in a better condition to make a post-operative fight. All of the organs should be put in their best possible working order, but especial attention should be given the kidneys, skin, and gastro-intestinal organs, which may be considered the great sewers of the body. It is his unvarying custom to flush out the kidney, and the bowels. The patients are encouraged to drink freely of water, and in order to secure this end he not infrequently prescribes a lithia tablet in a glass of water at prescribed intervals. Purgatives are given and intestinal antiseptics and fluid diet prescribed with strychnia for several days prior to the operation. If necessary, sleep is secured by giving some simple hypnotic, preferably sulfonal, especially when preparing for an abdominal section, and after alvine discharges have been secured by saline purgatives, he gives just before the operation a pint saline solution by the rectum. Not infrequently he gives mild purgative pills just before the anæsthetic is begun. He is careful to see that the operating room is warmed and that warm, dry clothing surrounds the patient. He does not like for the anæsthetizer to begin the anæsthetic until the preparation of the patient for the operation is well advanced. We often hear, he fears, without heeding it as we should, the truism "as well club a patient with a sandbag, as to shock him by too much, or too prolonged anæsthesia." Too profound, or too prolonged anæsthesia induces shock. It is not unreasonable, he thinks, to claim that too little may be equally a factor in producing shock, i. e. not enough to eliminate consciousness of pain. In any event we may claim that the judicious exhibition of the anæsthetic is important in the matter of preventing shock. He knows of no greater comfort to the operator than an intelligent anæsthetizer, one who knows when to push the anæsthetic and when to let up with it.

He seeks to guard against shock during an operation, by working as rapidly as is consistent with completeness and especially complete in limiting the loss of blood during the operation. He has at hand, ready for immediate use during an operation, strychnia, digitalis, caffein, nitro-glycerin, saline solution, etc., and he is anxious to anticipate shock in the use of these remedies rather than to trust to them after shock has well set in. If the abdomen is open, hot saline solution is much depended upon in shock, He thinks it would be a part of the duty of the anæsthetiser to watch for shock, and apply appropriate remedies. Rapid surgery is not always complete surgery, and while he would not urge celerity at the expense of thoroughness, he regrets a failure to grasp and act upon emergencies promptly as they arise. Complete surgery limits primary and reactionary hemorrhage, and prevents shock. Complete surgery wards off septic infection and the most dangerous of all shock—that incident to rapid ptomain absorption,

No time should be lost in getting the patient back to bed after the operation, as each half hour consumed in operation and dressing the patient adds to the degree and danger of shock. Dress, dry and warm the patient as quickly as possible. He usually orders a pint of hot, saline solution and an ounce of whisky to be given by enema as soon as the patient is in bed. He considers it all important to dry the patient by friction with dry towels or the hand. Hot water bags are useful but must be watched so as not to act as a hot pack, or

burn the patient. If reaction is not prompt, treatment is continued by administering saline solution under the skin, by the rectum, or by direct transfusion, if the case is urgent. He has not practiced it but is inclined to think well of the practice of filling the abdomen with saline just before closing it. Strychnia, digitalis, caffein, nitro-glycerin, atropin, and morphia, are administered at intervals, and cold tea and coffee may be given with advantage by the rectum. His experience impresses the conviction that patients treated along this line, will, with few exceptions recover from shock which is uncomplicated. He does not believe in the so-called, prolonged shock, delayed shock, etc., in such cases, he thinks, we have shock plus hemorrhage, or the ptomain shock incident to rapid sepsis and, in exceptional instances, fat embolism, or venous thrombosis to contend with. In shock, hemorrhage and sepsis, he recognizes the trinity of dangers common to traumæ and surgical interference, and their prevention secures against diminished local and septic resistance.

Operation versus Taxis in Strangulated Hernia.

Dr. McAdam Eccles, in the West London Medical Journal, states that, "Taxis may obviate; operation may have to follow on ineffectual taxis; or operation may be performed without any previous attempt at taxis." He holds that taxis should take the premier place at the two extremes of life, infancy and extreme old age, but that herniotomy should be preferred to taxis in the majority of cases of strangulated hernia occurring in middle life. The specific advantages of operation he holds to be as follows:

1. The contents of the sac will be entirely spared the risk of serious injury by the manipulation to which they are subjected by taxis. There is a very grave and real danger of producing ecchymoses in the wall of the bowel, and I am sure that the failure in the recovery of the bowel after reduction is, in many cases, due to this bruising setting up inflammation. Moreover, actual laceration is not unknown as the result of indiscreet taxis. 2. An accurate investigation of the condition of the contents of the sac can be made after incision. When they are exposed to view, there is also the certainty that they will be dealt with in the way in which their actual condition demands. 3. The fluid which is exuded from the blood vessels of the bowel wall into the cavity of the sac rapidly becomes septic, owing to the passage of micro-organisms through the congested intestinal wall, and among the most frequent is the *Bacillus coli communis*, so often the producer of septic peritonitis. This fluid must of necessity be returned into the abdominal cavity if taxis is employed with success; on the other hand, if an operation is performed, all the fluid contents of the sac can be thoroughly washed away by an antiseptic solution, and the viscera cleaned before they are returned. 4. Further, a herniotomy enables the surgeon to proceed to the obliteration of the sac and the more or less complete closure of the aperture through which the hernia has escaped—both with a view to the prevention of the return of the protrusion. Such a complete operation will, moreover, do away with the likelihood of a recurrent attack of strangulation, which the patient still remains ever liable to when treated merely by reduction and truss.

On the other hand, he says, there are certain facts which tend to militate against a perfectly safe performance of an operation for the relief of a strangulated hernia:

1. The careful preparation requisite in order to secure that asepsis which is all important takes some time, in fact, a not inconsiderable amount, all of which period the contents of the sac remain strangulated, their circulation impaired, and their nutrition endangered. 2. A general anæsthetic is usually required, and this in itself is not without its dangers, for there is no time for any preliminary preparation for it, and the patient has in most cases repeated attacks of profuse vomiting, which are highly hazardous under an anæsthetic. Many of the smaller-sized strangulated herniæ can be satisfactorily dealt with by operation with the use of a local anæsthetic alone, but a thorough operation with a view to cure can hardly be performed under these conditions. 3. Sepsis should, of course, be easily avoided and certainly so, but failure to obtain asepsis may occur, and this complication is so serious a matter that the fear of it deters many from operating before applying taxis. Suppuration in the abdominal wall might not lead to anything more annoying than delay in the process of healing, but infection of the peritonæum may cause fatal septic peritonitis. 4. If too free an incision of the structures forming the stricture be made, a larger aperture may result than was present before and a worse hernia follow. 5. Also after operation a patient is confined to bed for some length of time. 6. Lastly, there has to be taken into account the not unnatural shrinking, on the part of the sufferer, from any procedure which requires incision.

Announcement.

The Pittman prize of $100 for the best Medical Essay will be given at the next meeting of the State Society to be held at Asheville in 1899.

This is upon the authority of Dr, Pittman's daughter.

The members of the Society will govern themselves accordingly, and a large number of competitors will be welcomed.

American Climatological Association.

PRELIMINARY PROGRAMME.

The Fifteenth Annual Meeting will be held at the Maplewood Hotel, near Bethlehem, N. H., on August 31st and September 1st, 1898.

The following programme has been arranged:

OPENING ADDRESS.—August 31st, 10 A. M., by the President, Dr. E. O. Otis, of Boston. Subject—Avenbrugger and Laennec, the Discoverers of Auscultation and Percussion.

Common Errors of General Practitioners in Dealing with Cases of Pulmonary Tuberculosis, by Dr. F. I. Knight, of Boston.

Notes on the Position of the Lower Border of the Heart, by Dr. Glentworth R. Butler, of Brooklyn.

A Case of Dissecting Aneurism of the Thoracic Aorta Rupturing into the Pericardial Sac and Causing Immediate Death, by Dr. Judson Daland, of Philadelphia.

The Influence of Respiration on the Action of the Heart in Health and Disease, by Dr. R. G. Curtin, of Philadelphia.

Diseases of Children as Influenced by Altitude in Colorado, by Dr. Charles F. Gardiner, of Colorado Springs.

BUSINESS MEETING.

In the afternoon at two o'clock the Association is invited to a drive to the "Profile," by the courtesy of Dr. C. F. McGahan.

September 1, 9.30 A. M. to 1 P. M.

Clinical Notes on Asthma and its Treatment, by Dr. Beverley Robinson, of New York.

Ergot in Chronic Malaria, by Dr. A. Jacobi, of New York.

Concerning the Natural History of Pulmonary Tuberculosis, by Dr. J. C. Wilson, of Philadelphia.

A New Inhaler, by Dr. H. Longstreet Taylor, of St. Paul.

The Treatment of Hay Fever, by Dr. J. C. Mulhall, of St. Louis.

Sanatoria for the Consumptive Poor, by Dr. J. M. Anders, of Philadelphia.

Infection from the Hands in Phthisis, by Dr. E. L. Baldwin, of Saranac Lake.

BUSINESS MEETING, 2.30 P. M.

The Value of Systematic Physical Training in the Prevention and Cure of Pulmonary Disease, by Dr. E. Fletcher Ingals, of Chicago.

The Distribution of Pulmonary Tuberculosis in New Jersey, by Dr. Guy Hinsdale, of Philadelphia.

A Single Test of the Virulency of Sputa Kept Many Months, by Dr. Irwin H. Hance of Lakewood.

Some Statistics upon Serotherapy in Tuberculosis, by Dr. J. E. Stubbert, of Liberty, New York.

Papers are also promised by Dr. H. P. Loomis, Dr. S. G. Bonney, Dr. Charles E. Quimby and others, whose subjects have not yet been announced.

7 P. M., Annual Banquet at the Maplewood Hotel.

September 2d. The Association will make the Ascent of Mt. Washington, leaving Maplewood about 7.45 A. M., returning at 4.20 P. M.

To insure prompt appearance of the *Transactions*, authors of papers are requested to leave their manuscripts with the Secretary immediately after the reading of the paper.

The Secretary's address from July 7th until September 7th, will be "The Sinclair," Bethlehem, N. H.

A fast train on the New York, New Haven and Hartford Railroad, leaves the Grand Central Station, New York, daily, at 9 A. M., and is due at Maplewood at 7.15 P. M. Members from Western points can board the train at Springfield, Mass., at 12.27 P. M. Morning trains leave Boston at 9.40 o'clock, via Boston and Maine Railroad, Eastern Division, passing through the Crawford Notch, and due at Maplewood at 4.17 P. M. For other trains see Official Guide.

The Council at its meeting in Washington recommended that the Constitution be changed, so that Article III., Section 1, shall read, "This Association shall consist of *Active*, *Corresponding*, and *Honorary Members*; the latter shall not exceed twenty-five (25)."

Article III., Section 3, "The power of nominating Honorary and Corresponding Members shall be vested in the Council."

OFFICERS OF THE ASSOCIATION, 1898.

President—E. O. Otis, M. D., Boston.

Vice-Presidents—Beverley Robinson, M. D., New York; C. F. McGahan, M. D., Aiken, S. C.

Secretary and Treasurer.—Guy Hinsdale, M. D., Philadelphia.

Council.—Roland G. Curtin, M. D.,

Philadelphia; Isaac Hull Platt, M. D., Lakewood; S. E. Solly, M. D., Colorado Springs; James B. Walker, M. D., Philadelphia; E. Fletcher Ingals, Chicago.

Saline Injections.

While much has been written on the subject of the intravenous and subcutaneous injections of normal saline solution, there is much in the current literature on the subject showing that the resources and limitations of these procedures are not always clearly understood.

Originating as substitutes for the transfusion of blood in acute anæmia, they have become recognized as a blood washing process, to adopt the felicitous expression of Hare; and it is doubtless his writings which have given them more prominence in this role than they would have gained without his strong and authoritative advocacy. But it is precisely in this role that the principles of their employment and all helpful modifications of method should be clearly understood, in order to attain the results which we may justly expect from them. And it is right here that most of the haziness of conception and application appear.

A toxæmia may be measurably washed away by the stomach route, if that organ will receive and absorb enough fluid which can later find free exit through the proper emunctories. It can be accomplished by the intestinal route, with the same proviso as to absorption and elimination. Intravenous infusion or hypodermoclysis simply makes sure of the first step of the process; but unfortunately it does not always make sure of the last and equally essential step—excretion.

Through-and-through washing means outflow as well as intake. It presupposes sound eliminating organs capable of doing, singly or combined, their proper work. Renal elimination is the key of the arch; if defective the arch totters; if too defective it must be replaced by a substitute or the arch will fall. The fluid pumped in to wash out the vascular contents, and, as a consequence, the tissues of the whole body, must drain away, else there is not a washing away, but simply a dilution of poison. If, therefore, the kidneys do not afford an exit, some other channel must be sought. Will the skin, or the intestinal canal best afford this?

In a short paper read before the scientific meeting of the Rush College Alumni Association last year, and in another presented before the Wisconsin State Med. Soc. last month, the writer of this discussed associated hypodermoclysis and enteroclysis as a more effective measure in cases characterized by bad or absent renal elimination; and the suggestions admit of a very brief summary: If the case be urgent—for instance in uremic or diabetic coma—both injections may be made at once. Preferably when there is time, make the colonic injection first, to start exosmosis from the intestinal blood vessels before the general vascular system is overfilled by the subcutaneous injection. There is reason to believe that what would thus be lost in arterial tension would be more than compensated for by a more rapid absorption—a distinct gain, where free drainage is established in advance.

The colonic clyster should be a very dense saline solution—magnesium or sodium sulphate, by choice. Sodium chloride will be as effectual; but experience shows that, in adequate strength, it is irritating to the rectum, and may cause hemorrhoids. The saturated solution, at first chosen, proved too severe. A 10 per cent. solution will do very well.

The intestinal injection of the normal saline solution has been proposed and used as a substitute for hypodermoclysis in acute anæmia, for instance, that caused by postpartum hemorrhage. A moment's reflection will show the inutility of this, except as its high temperature may contribute to hemostasis or to revival from shock. The normal solution would cause substantially an equilibrium of fluids on opposite sides of the intestinal wall, and osmosis would be at a stand-still. The thing desired in this condition is a flowing into the vascular channels through the intestinal walls; and the strength of the solution used must consequently be subnormal. Of course every one knows this if he will stop to think; but if in a hurry, we don't always stop for this salutary exercise of the mind.

J. R. Barnett, M. D.

Neenah, Wis.

The Value of the Roentgen Ray in the Diagnosis of Thoracic Diseases.

J. E. Stubbert (Yale Medical Journal for February, 1898,) gives his investigations as follows:

1. The fluoroscope is an active agent for corroborating and extending diagnosis made by the ordinary methods. 2. It is capable of demonstrating foci of tubercular infection earlier than they can be distinguished by the ear. 3. It shows either unilateral or bilateral enlargement of the heart and all displacements of that organ. 4. Emphysema, asthma, pleurisy, hydropneumothorax, pyopneumothorax, hydrothorax and pneumonia are all easily recog-

nized and their limits demonstrated. In the last named disease it has been claimed that a more certain prognosis may be assured by the use of the fluoroscope. 5. Thoracic aneurisms are recognizable in their early stages.

A summary of the diagnostic signs is as follows:

1. Slight haziness indicates the beginning of tuberculous infiltration and may or may not be accompanied by dulness. 2. Decided shadows indicate consolidation, the extent of which is in direct relation to the comparative density of the shadow thrown on the fluoroscope. 3. Circumscribed spots of bright reflex, surrounded by narrow dark shadow rings, or located in the midst of an area of dense shadow, indicate cavities. 4. Intense darkness, especially at the lower portion of the lung, indicates old pleuritic thickening over consolidated lung tissue. 5. Pleural effusions are shown in black shadow, the upper level of which may be agitated by succession. 6. There is no reason to doubt that the effusion of pericarditis would throw a like shadow which would be distinguishable from the heart shadow above by its greater blackness. 7. Shadows thrown in the first and third stages of pneumonia probably resemble those of tubercular infiltration. The shadow of the second stage of pneumonia is identical with that of tubercular consolidation. 8. In emphysema and asthma the reflex is abnormally clear and the movement of the diaphragm is restricted.

A great deal depends upon the intensity and steadiness of light and the amount of muscular and adipose tissue intervening between it and the fluoroscope. An eight-inch spark coil has been found most satisfactory. The motor generation gives a steadier light than a vibrator, and the flickering of the latter is very trying to the eyes and confusing as to the relative intensity of shadows.

Considerable practice is necessary before the eye can appreciate perfectly the fine differences of shade and outline.

General Paralysis and Diabetes.

De Holstein, in the "Semaine Medicale," discusses the relation between diabetes and general paralysis. De Calvi, in 1864, was the first to suggest that the cerebro-spinal complications met with in diabetes were the result and not the cause of this condition. Cases of diabetes may be divided into three groups in their relation to general paralysis: 1. Transitory glycosuria is common in neurotic and insane patients, and has no etiological significance in general paralysis. 2. Glycosuria as a consequence of general paralysis: two cases have been reported where glycosuria was present for a time, too short for it to be an etiological factor, and then ceased abruptly before the onset of general paralysis. 3. True diabetes causing general paralysis: three such cases have been reported, two, however, being inconclusive. The third, by Landenheimer, is as follows: A man of good constitution, who was not an alcoholic, but was of a neurotic family, had suffered from diabetes for twenty years. When forty-eight years old intense headaches, vertigo, amblyopia, and loss of memory set in. These symptoms all improved after a course at Carlsbad, which caused a disappearance of the glycosuria. This improvement was only temporary, and on the return of the sugar in the urine typical symptoms of general paralysis began, and advanced rapidly. Under an anti-diabetic diet, the sugar was reduced, and, *pari passu* with this reduction, the mental condition improved, until the patient was able to act as an insurance agent very satisfactorily, the only signs of his former condition being slight left facial paresis, plus knee-jerks, and a difficulty in pronouncing long words. Although clinically undoubtedly a case of general paralysis, it is impossible to prove that it was so pathologically, and so Landenheimer named it "diabetic pseudo-general-paralysis." De Holstein thinks this case strongly supports Charpentier's theory of the toxic origin of general paralysis.

The Treatment of Acute Heart Failure.

M. H. Richardson (Boston Medical and Surgical Journal, Aug. 4th, 1898,). The treatment of acute heart failure may perhaps be best referred to in connection with pneumonia of which it too often forms the fatal turning point. In this disease the conditions affecting the heart are (1) stress of labor, (2) blood supply and nutrition impoverished and vitiated, (3) innervation, excited and debilitated by the effects of shock and pyrexia.

It will be generally noted that the heart failure comes on suddenly, but there may have been one or two preliminary warnings of partial collapse, etc. At the very beginning of these signs ammonia should be given but should be changed after a few days for a mineral acid, of which dilute phosphoric acid is the best. Some digitalis or strophanthus should be added to the mixture and strychnine should be given separately either in an extra quantity or subcutaneously, if the absorbing powers of the patient are at all doubtful. But the most powerful remedial agent is oxygen,

and should be at hand in all severe cases and should be given in good time as an occasional inhalation. In any case where heart failure threatens, the high temperature must be reduced by a degree or two by hot or cold sponging.

For sleeplessness a small dose of ten grains or twenty grains of sulphonal, taken in a hot fluid at 8 or 9 P. M., and with this preliminary a twenty-grain dose of bromide taken at 10.30 P. M., is often sufficient to secure some restful sleep. When delirium is a marked feature hyoscin in doses of one-two-hundredth grain subcutaneously, and repeated once or twice, may sometimes be used to advantage. Cases of persistent sleeplessness almost invariably prove fatal with heart failure. In these severe cases morphine should be given to secure a few hours' sleep and to give the nervous system time to recuperate, and to allow of some restoration of heart power before it is too late. Death has appeared to be averted in some cases by (1) a strong dose of food and stimulant, (2) one-third-grain dose of morphine with atropine, (3) the maintenance of æration by the oxygen current being frequently played over the mouth and nostrils for a few minutes at a time. The oxygen may be warmed as it enters the bag by passing it through a coil of tubing immersed in hot water. Strychnine seems to favor this peculiar sleeplessness of patients when utterly exhausted, but its power is unrivalled as a cardiac stimulant and its use in cases severe enough to lead up to this condition is quite essential and it may be renewed on the effects of the morphine passing.

Acute heart failure in other diseases and from other causes requires a similar handling, varied to meet varieties in the case. Oxygen inhalations are particularly valuable in the treatment of heart failure due to fatty degeneration of the organ in old people. Cheyne-Stokes breathing is a symptom in these cases. Strychnine is a most useful cardiac stimulant.

Anasarca without Albuminuria or Visceral Lesion.

Lascol, according to the British Medical Journal, has recently made an extensive series of observations on the occurrence of anasarca which is not dependent on renal, cardiac, or any other apparent visceral lesion. In early life cold is particularly important and seems able to produce anasarca, which may be the only manifestation of its effects. The influence of rheumatism seems to act pretty frequently, and the same may be said of various infections, and it is a known fact that intoxications, such as those of lead, alcohol, carbonic oxide, etc., are capable of producing œdema. The author also quotes a case of anasarca without albuminuria occurring in a patient affected with malaria. This he considers might be looked upon as another instance of toxæmia. He quotes cases of anasarca occurring during pregnancy, but unaccompanied by albuminuria, and in which there was no evidence of compression of any portion of the circulatory system. There are a certain number of cases which he includes under the head of dyscrasias, of which chlorosis is an example. Of all these forms, the writer looks upon infantile anasarca *a frigore* as perhaps the most remarkable. He distinguishes two forms, the one febrile with a certain amount of general reaction; the other apyretic and without other symptoms. In the former the skin may present some slight pink coloration; beginning with headache, slight pyrexia, with or without rigor, some thirst and anorexia, rarely vomiting or diarrhœa. The œdema may first be quite generalised; in other instances it begins locally, but progresses rapidly and remains several days, after which it begins to decline. The urine, diminished in quantity is always free from albumen. From seven to fourteen days may be the entire duration of the attack, the general symptoms extending only over the first two or three days. Prognosis is favourable, the cure being complete and permanent. The chronic form of infantile anasarca is much rarer, and prognosis is bad, such cases as have been described having ended fatally. In the adult anasarca *a frigore* is more indefinite in its characters, often beginning with marked general symptoms, rigor, and headache, the œdema developing slowly. The duration varies from a fortnight to three months; the œdema may recur several times. Rheumatic anasarca is not confined to the acute forms of the disease, for in some instances it occurs in connection with the arthritic diathesis as the only manifestation. It may also be met with in gouty subjects, and Breucq is quoted as reporting a case of generalised anasarca in a gouty patient without the least albuminuria. Teissier and Lecreux describe the case of a gouty patient without albuminuria or cardiac disease in which the arthritis was on one occasion replaced by general anasarca lasting three months. Cénas records two observations of anasarca accompanying erythema multiforme, the patients having extreme swelling of the eyelids, and hard œdema of the lower limbs. The site of the œdema did not always correspond with the eruption. Cénas thinks that the unknown infective agent of erythema multiforme has marked

predilection for the peripheral termination of the nerves and acts by producing transitory peripheral neuritis. Anasarca has also been noticed in locomotor ataxy insular sclerosis, epilepsy, and hysteria.

Yellow Fever.

From every American citizen there proceeds the earnest and constant prayer that full and complete victory may reward the efforts now being made by our army in Cuba. This conflict presents many interesting problems to the students of military and its allied sciences. That branch which pertains to the military sanitarian is not the least arduous, and especially anxious must he be about the likelihood of the development of yellow fever among the troops. This disease remains one of the few that has not yet been thoroughly worked out by the scientist and still presents those elements of uncertainty as to its origin and proper treatment that produce in a community panics of fear, such as always go with impending dangers which are not understood. Recall but a few years and remember the agony of helpless dread that spread over the world because cholera had made another incursion into Western Europe; but now, since we know exactly what produces cholera, and how it may be avoided, though the disease is still as fatal as ever after it is contracted, no one fears it with the former terror. Give us but the knowledge of the foe with whom we grapple and we can struggle with good hope of overcoming him in one or another way, but nothing so destroys the ability to fight as a battle in the dark with an unseen destroyer. Now yellow fever continues to be such a foe, and so we still draw cordons of quarantine about the fever-stricken town, just as was done centuries ago, and try to confine an enemy whose means of escape we do not comprehend. The proper method is to clear up, by patient observation and close and persistent study, those dark spots in the disease that serve now to mystify us. What produces yellow fever? How does it live, and how does it spread from one to another human being? Do we drink the germ, or eat it, or do we breathe it in, or is it inoculated by insects? These questions are being asked to-day all the world over, but nowhere will they appear more weighty or worthy of more consideration than in our invading army. Could we answer all or even any one of these questions with certainty, the treatment and prophylaxis would be wonderfully simplified and more lives would be saved than are likely to be sacrificed by Spanish bullets. The politician and the strategist may have difficult problems before them in Cuba, but no one has a more important field for study than the well-equipped physician to whom these vital questions appeal. Some one must discover the nature and development of the yellow fever germ, and to him will come never-ending honor and renown. He who gains a battle or destroys an enemy's fleet deserves the plaudits of the multitude, but his work is as nothing when compared with his who succeeds in conquering a disease that has for ages caused annually the sacrifice of thousands of lives. Most fertile countries now pestilential and almost uninhabitable will then become gardens of cultivated vegetation, new rivers and valleys will be opened to commerce and the rich tropics will be robbed of their most dreaded terror. A single glance through the microscope may bring about this marvel; the use of some fortunate differentiating stain may reveal the secret. Let all who can join in the search until the end shall have been attained, and yellow fever, like cholera and typhoid fever, and so many other diseases that have been satisfactorily studied, will cease to be a hidden foe.

Chas. O'Donovan, M. D.
10 E. Reed St., Baltimore, Md.

A New Source of Typhoid Fever.

The Secretary of the State Board of Health of Michigan has recently issued the following bulletin pertaining to typhoid fever infection (Physician and Surgeon, July, 1898.): "Recent reports to the Board of Health show that at least two cases of typhoid fever have been caused by drinking water in or from the Kalamazoo river. In no case should water be used for drinking or culinary purposes from a river or stream into which sewage is emptied or privies are liable to drain; and as most of the rivers and streams of this state have towns situated upon or near their banks, from which sewage is received, and privies are liable to drain, therefore it is very dangerous to use the water from any of the rivers or streams for any culinary purpose whatever, except the water be first boiled, and it should not, in any case whatever be drank, unless previously boiled. Cases have been reported wherein typhoid fever has been contracted by bathing in streams. Probably this will be most likely to occur through accidentally or carelessly taking the infected water into the mouth. Especially should no person bathe in any ordinary stream just below any city, village, or other source of sewage or privy drainage."

Diseases of the Alimentary Canal.

Hills Cole, M. D., (Journal of Electro-Therapeutics, July, 1898.)

For the relief of painful symptoms in gastric and intestinal dyspepsia I have relied with satisfaction on the static breeze or sparks applied over the stomach and abdomen and to the spine. When the exciting cause is an atonic condition of the nerves of these organs, static electricity will often go on to a cure of the trouble, but in catarrhal difficulties we are liable to have but little permanent success. In dilatation of the stomach Einhora uses an intragastric electrode for the application of Faradism. In nausea and vomiting occurring as a reflex from genital conditions in women, bipolar, vaginal Faradization with the long fine-wire coil is indicated. My experience would lead me to believe that half our patients, at least half our women patients, suffer from obstinate constipation. And there are many women afflicted in the same way, who never think of mentioning it to a doctor. They have long ago given up all hope of relief, and settled down to a life of physicking or the use of suppositories or enemata, There is no cause for such a despairing attitude, however, until a faithful trial of electricity has been made. In many cases the constipation is but one of many symptoms of a defective condition of the general system, and in these it has been my experience that in a course of static treatment for the general condition the constipation has often disappeared, even though it was of many years' standing. If the liver is at fault, attention should be paid to it. Pad electrodes, about five by six inches, should be placed front and back of the organ, connected respectively with the positive and negative poles, and a current of ten to thirty mil. passed for fifteen minutes. For the constipation itself we can put a positive galvanic pad under the sacrum, and pass a negative hand electrode along the course of the large intestine for ten or fifteen minutes with a current strength of from ten to twenty mil. From time to time during the treatment some interruptions in the flow should be made. Or we can put a bare metal electrode of a bulbous shape into the rectum for an inch or two, attach it to the positive pole of a Faradic battery, and apply the negative as before with a current from a medium coil and a medium strength. Or, best of all, we can use a hydro-electric rectal electrode inserted four or five inches into the bowel and let a current of warm saline solution carry with it an application of galvanism. The negative is attached to this electrode and the positive to a large pad on the abdomen, and a current of five to fifteen mil. passed for fifteen minutes, or until a fecal discharge occurs. During the course of the seance the polarity can be reversed once or twice. Daily treatments are given to start with. In the intestinal troubles of infants static electricity can be administered by letting the little patient lie in the nurse's lap while the nurse is seated on the platform, or a form of general Faradization can be administered for nutritional purposes by putting the baby into a small tub containing warm water into which two carefully-protected electrodes are immersed, and turning on a mild current for a few minutes.

Nature's Cure of Phthisis, and an Effort to Imitate It.

John T. Whittaker, of Cincinnati, Ohio, presented a paper with this title at the recent Denver meeting of the American Medical Association.

Schlenker made a complete autopsy in 100 bodies and found 66 were tuberculous; of these, tuberculosis was the cause of death in 53 per cent., was of great importance in 6 per cent., and was latent in 41 per cent. of the cases. These numbers are minimal, because the examination was a macroscopical and not a microscopical one. A true estimate of the frequency of this infection can be derived only from tests with tuberculin. It is universally conceded that two-sevenths of mankind succumb to tuberculosis of the lungs alone; two-thirds of mankind are affected with tuberculosis; and one-third die of the disease. Therefore in one-half of the cases recovery is complete, or the disease is reduced to such a quiescent state as to be practically non-existent. What is the process of cure in these cases? Pretty much all the cases which have the benefit of altitude recover. There is something in altitude which gives, first, immunity, and in the second arrests the progress of the disease. Autopsy reveals the presence of adhesions, of nodules- of cicatrices and cirrhotic induration. The natural processes of cure seem to be initiated (1) by means which in some way chemically destroy the tubercle bacillus, either directly or by means of the action of toxins or antitoxins, or (2) indirectly by sterilizing, immunizing or invigorating the soil. We must bear in mind that phthisis as we see it is not a simple but a mixed infection, whereby toxins are intensified through symbiosis. Certain micro-organisms antagonize, others intensify, each other. The engrafting of the streptococcus pyogenes upon the tubercle bacillus produces toxins of a higher degree of virulence than belongs to either, alone. One of the most

important factors in the treatment of tuberculosis is the prevention of mixed infection.

Do we get any light as to natural processes from our successes with drugs? Creosote is the only drug which has held its place in the treatment of phthisis. Does it sterilize the soil, and is any such substance produced in nature? Unfortunately there is no good working theory to explain the action of creosote. It is admitted on all sides that this drug destroys all organisms that induce fermentation in the stomach without affecting the process; and the virtues of the creosote have been ascribed to the improvement of the nutrition, which sets in, in some cases surprisingly soon. What would seem to lend support to this view is the superior virtue of the carbonate of creosote, the so-called creosotal, the least irritating to the stomach.

The only natural agents known to have an inhibitive effect upon the tubercle bacillus are some of its own products, to-wit, the so-called various tuberculins which have been extracted from culture soils. Gross attempts have been made to imitate nature through the processes of cicatrization, notably by Landerer with cinnamic acid, which he found would induce a migration of leucocytes into the necrotic tissue of tubercle. This process was followed by the penetration into the mass by young blood-vessels, the formation of connective tissue with subsequent shrinkage and contraction. Of fifty cases treated, 58 per cent. were reported cured, 20 per cent. improved, and 4 per cent. unimproved, while only 9 per cent. died. The latest efforts to secure leucocytosis by the ingestion of various nucleins, enzymes, etc., find also only individual support.

Nothing in art approaches the efficacy of nature in controlling tuberculosis of the peritoneum by exposure of that structure to the external air. The speaker then cited as a sample of the sweep of surgery a desperate case of tubercular peritonitis, which recovered. The opening, the exposure, the irrigation of cavities in the lungs is not often followed by such happy results. Surgery fails for the most part in the lungs, probably because of the mixed infection, but more probably because the knife can not reach, lay open or exsect the mother colonies in the bronchial glands.

Another attempt to imitate nature consisted in producing hyperæmia in order to secure the effects of carbonic acid gas, because it had been shown that patients with heart disease attended with hyperemia of the lungs enjoyed a certain immunity from tuberculosis; so also with persons affected with emphysema. Also, in certain deformities of the chest, patients were exempt because a certain amount of carbonic-acid gas was distributed over a smaller surface. Traube produced this gas in the stomach with hydrochloric acid and bicarbonate of soda. Bergeon attempted to produce the same effect by means of the infection of sulphuretted hydrogen into the intestines.

Motor Carriages for Babies.*

That electricity will play a great part, much greater than it does at present, in the locomotion of the future, is so self-evident a fact that it may appear superfluous to draw attention to it. For the past year or two there has been a craze for motor carriages propelled by various forms of motive power. This craze has reached its height in France, where motor carriages, busses, and cariages of every description abound and where numerous long distance races have been held to determine the relative merits of different kinds of horseless vehicles. England also has taken up the idea, and electric busses and cabs career through the crowded streets of London to the alarm of man and horse alike. By the enthusiasts for this means of locomotion it is confidently expected that the reign of the horse is doomed, and without going so far as this there can be no doubt but that his sphere of usefulness will be greatly restricted and that electricity will, to a very large extent, take his place. It has, however, been reserved for an American to apply electricity to the needs of the rising generation. It is stated in a New York daily journal that Mr. Edison has invented an electrically propelled baby-carriage, and that Brooklyn is the scene of this novel invasion. If successful this new form of locomotion will mean the passing of the nurse maid; her services as a propeller of the old-fashioned hand power carriage will be no longer required except in the early stages of child life. We may expect now that when a boy or girl reaches say the age of three years that he or she will be deemed competent to take an airing in the park or on the sidewalk in a perambulator whose motive power is in a small battery and motor in the vehicle stored. True, a new terror will be added to the dangers of pedestrian travel in towns, and no doubt at first the casualties will be numerous, but this is a matter of little consequence so long as our young are happy and amused.

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*Abstract of an editorial in Pediatrics, Aug. 1, 1898.

American Medical Association.

At the recent meeting of this Association the following was unanimously adopted:

Whereas, the American Medical Association did, at Detroit in 1892, unanimously resolve to demand of all the medical colleges of the United States the adoption and observance of a standard of requirements of all candidates for the degree of doctors of medicine which should in no manner fall below the minimum standard of the Association of American Medical Colleges; and

Whereas, this demand was sent officially by the Permanent Secretary to the deans of every medical college in the United States and to every medical journal in the United States, now therefore the American Medical Association gives notice that hereafter no professor or other teacher in, nor any graduate of any medical college in the United States, which shall after January 1, 1899, confer the degree of doctor of medicine or receive such degree on any conditions below the published standard of the Association of American Medical Colleges, be allowed to register as either delegate or permanent members of this Association.

Resolved, that the Permanent Secretary shall within thirty days after this meeting send a certified copy of these resolutions to the dean of each medical college in the United States and to each medical journal in the United States.

The Treatment of Caries of the Spine.

Jackson Clarke (Harveian Society of London, March 31, 1898) said that in its main features tuberculosis of the spine might be compared with a similar condition in a large joint. (British Medical Journal).

Radical treatment in the form of complete excision of the diseased parts had been practiced even in the spine, but the usual means adopted were (1) rest on a firm mattress in the supine position with or without weight extension; (2) Phelp's box; (3) the double Thomas's splint; (4) Sayre's plaster jacket; (5) the felt corset; (6) steel splints, alone or combined with rest on a prone couch. Whenever symptoms pointed to rapid progress of the disease, rest with weight extension was indicated. In less rapid conditions Dr. Clarke preferred a good steel splint to any form of corset; Chance's (1852) and Taylor's (1871) were the best known of the steel supports. In principle they were closely allied. Dr. Clarke used the older of these instruments and found it very satisfactory, as it admitted of readily-effected modifications in cases of cervical and high dorsal caries. Combined with rest on a prone couch, Chance's splint could be used successfully even in unpromising cases. The chief complications were (1) abscess, (2) sinus, and (3) paraplegia. Dr. Clarke related a case in which a psoas abscess had ruptured, causing a diffuse suppuration in the thigh. Since antiseptics had removed the objections to early opening of these abscesses, there was no need of long delay when once the condition had been recognised. Sinuses need only be feared when abscesses opened spontaneously, and even when of old standing they could be often made to close by injecting daily one or two drachms of one to forty carbolic lotion. When profuse suppuration persisted, or lardaceous disease threatened, sinuses might demand operative measures. With regard to paraplegia he had seen even hopeless-looking cases recover without operation, and in every case he would give rest a prolonged trial before contemplating surgical interference. Laminectomy was indicated in many cases of fracture of the spine, but fracture was of rare occurrence in caries, and on *a priori* grounds it would appear to be undesirable to remove the remaining sound parts of the spinal column opposite the seat of disease. Immediate reduction of the angular deformity had in several caes of paraplegia appeared to do good, and it might certainly be tried as an alternative to laminectomy.

The Contagiousness of Venereal Warts.

Payne (British Journal of Dermatology). Venereal warts are generally stated to be due to:

1. The irritation of gonorrhœal and other discharges, generally long continued. 2. Neglected condylomata.

Cathcart, however, considers that venereal warts are contagious in themselves, and independent of local irritation and of syphilis. In support of this view he quotes three cases:

1. Warts on the genitals of a woman soon after marriage; previous warts on penis of husband; no discharge in either. 3. Gonorrhœa and warts in the vagina of a recently married woman, acquired from gleet and a wart within the meatus of the husband. 3. Non-venereal warts on the hand, scraped by the medical attendant with his finger-nail, and subsequent development of warts under the nail.

He mentions that the warts are often in the labio-crural fold, away from any discharge in the female, and in the male at the back of the glans away from the meatus. That the warts are independent of syphilis is shown by their frequent occurrence with

no signs of syphilis. Warty growths in secondary syphilis are warty condylomata, and not true warts. Both warts and condylomata may occur in the same patient, the warts being more irregular and pedunculated, and remaining after antisyphilitic treatment.

The author considers the warts to be true tumours, and sums up as follows:

1. Warts may exist without any irritating cause. If this is present, it is not of the nature of cause and effect. 2. Warts may spread to the mucous membrane of the urethra and anus, where there are no papillæ of the skin. 3. Local irritation and discharges may exist indefinitely without causing warts. 4. Warts may occur soon after connection without the possibility of any long-continued irritation. 5. The overgrowth of papillæ in elephantiasis, and the warty condition of the skin near urinary fistulæ and callous ulcers, are not true warts. 6. Warts differ from condylomata in their mode of growth. The condyloma is mainly an overgrowth of connective tissue to which the epithelial covering is secondary. The wart is essentially an epithelial growth.

The Uses of Chinosol in Surgery.

F. Hobday, according to Treatment, July 28th, 1898, has investigated the action and uses of chinosol as a surgical application. At the Royal Veterinary College he has tried it on dogs and horses. As an antiseptic and disinfecting solution, the best results were obtained with solutions of 1 in 500 to 1 in 1,000. In foul ulcerating wounds, the stronger solution soon caused a healthy action, and gave better results than solutions of lysol or creolin. As a dusting powder the pure chinosol was too painful, and in some cases caused toxic effects. The author therefore uses it diluted with boracic acid, zinc oxide, or starch. As a disinfectant to the hands, skin, and sutures, solutions of 1 in 1,000 to 1 in 100 were used without causing any irritation. In the case of instruments, too strong solutions caused blunting of the edges and greenish-black spots on the steel, which were difficult to remove. The solution should not exceed 1 in 1,200 for such instruments. The author gives details of several cases, and concludes as follows:

1. Chinosol acts well as an antiseptic, disinfectant, and deodorant when used in certain proportions. 2. Its action is better marked when used as a lotion than when used as a powder. 3. The fresh powder is not suitable for use on fresh wounds unless diluted in some way. 4. For the disinfection of instruments, care must be taken not to make the solution too concentrated. 5. The drug possesses toxic properties. 6. If used subcutaneously in too concentrated a form, it will produce local irritation and swelling. The strength recommended for subcutaneous injections in human practice is from 1 in 600 to 1 in 200. 7. The chief symptoms of poisoning are (in animals): Sneezing and coughing, salivation, subnormal temperature, staggering gait, prostration, and ultimately death from syncope. 8. The chief post-mortem effects are the smell of the drug and the presence of frothy saliva in the pharynx, œsophagus, or stomach.

Treatment of Ununited Fractures.

Dr. Arbuthnot Lane is a strong advocate for the employment of the steel screw in cases of ununited facture. He lays down the following rules (Clinical Journal, June 15th, 1898):

1. The surgeon must not be satisfied with removing a thin layer of bone on each side of the ankylosis, but a thick slice must be taken off the end of each fragment so as to expose the shaft. The bone in the immediate vicinity of the false joint appears to undergo such vascular changes as to interfere with the formation of callus and bony ankylos. If a thick slice of bone which has been sawn off one of the fragments in such an operation is divided vertically, the bone next the false joint is found to be dense and evascular, and this condition extends for some distance into the shaft. Therefore, in order to obtain bony union with any certainty, it is necessary to sacrifice a considerable portion of the limb, and the amount of bone removed from each fragment must bear a direct relationship to the interval elapsed since the injury. In fractures of the tibia the difficulty is increased by the necessary removal of part of the fibula, this bone not being broken at the same time.

2. The recently sawn surfaces of bone must be retained immovably in accurate position. The difficulty of attaining this by wiring is due to the fact that the oblique sectional planes of the fragments are at different levels, and tend, when united with wire, to separate vertically, however firmly they are clamped during the boring of the holes. Again, the circumstances are quite different to those present in recent fractures, where with sufficient care the broken surfaces will correspond exactly. In the ununited fracture the plane of fracture is often only to be guessed, because it is modified by the callus, hence the advantage of using steel screws in these cases instead of wire

loops, the screews retaining the bones in proper apposition. Two screws should be used in different planes, so as to avoid rotation round the axis of one. The screws cause no irritation, and do not require removal. Dr. Lane recommends Gowan's osteotoms, which ensures accuracy of parallelism in sectional planes with a minimum of damage to the adjacent vessels. By using the clamp portion of the instrument without the saw, the cut surfaces can be held firmly in apposition during the boring of the holes and insertion of the screws. Dr. Lane gives several illustrative cases operated on in this way with good results. In one case a skiagram shows the bones united in good position three months after the operation. In this case, one of more than a year's duration since the fracture, three screws were employed.

Danger Signals in Rheumatism.

There are certain symptoms indicative of particular danger in the rheumatic attacks of children. These the careful practitioner will neither overlook nor ignore. Broadbent refers to three which are of particular importance: nodules, exudative erythemata and chorea. (Archives of Pediatics, Aug., 1898).

Rheumatic nodules were first described in 1881 by Barlow and Warner. They have been further described by Cheadle, who has called particular attention to their evil prognostic significance. "They mean," says Cheadle, "persistent cardiac disease, generally uncontrollable, and marching almost infallibly to a fatal ending."

Rheumatic nodules are small fibrous growths usually about the size of a pea but being sometimes much larger.

They are found in the neighborhood of joints, over the olecranon or condyles of the humerus, on the margins of the patella, over the malleoli, on the finger joints, on the sheaths of tendons; sometimes on the scalp or vertebral column, and are attached to the fascia, or sheaths of tendons, or to some portion of underlying fibrous tissue. The skin over them is freely movable, and they are best seen by flexing the joint over which they are situated when the skin is rendered tense. They usually appear suddenly and rapidly attain their full size, but are very slow in disappearing. They sometimes last for several months, but in rare instances disappear in a few days. They are met with only in children, being almost unknown after the age of twenty.

Exudative erythemata, of the type of erythema marginatum, or less commonly papular or urticarial in character, may occur in rheumatic subjects; they are not so frequently met with as nodules, but they may occur in conjunction with them, or alone, and they have also an evil prognostic significance. Small raised patches with sharply defined margins and of a dull red color, make their appearance. The centre of the patch usually undergoes absorption, and becomes of a pinkish or pale color, while the margins continue to spread as narrow raised red bands with irregular outline. The eruption is usually accompanied by some rise of temperature, and lasts a few days, gradually fading and leaving a slight brownish discoloration.

Although chorea is of less serious significance as regards danger to the heart than are the two conditions just mentioned, it is accompanied with heart complications with sufficient frequency to be looked upon with grave apprehension. The occurrence of either of these conditions should be a warning to the practitioner that the heart is in danger.

Infantile Eczema and its Treatment.

Comby (Archives of Pediatrics, August, 1898, abstract).

The importance of this subject lies in the facts that eczema is more frequent and more rebellious in infants than in older persons, and that it may give rise to various grave complications—cutaneous or visceral infections. As an etiological factor, by far the greatest weight is to be given to auto-intoxication resulting from gastro-intestinal disturbances due to bad feeding. Consequently eczema is far more common among bottle than among breast-fed infants. It affects the face especially, but may involve the neck and body; and it may remain dry, but is more often weeping and crust forming. Inpetigo, ecthyma and abscess formation frequently occur as complications, and make the diagnosis more difficult. The occasional development of such sequelæ as meningeal, pulmonary or intestinal diseases renders the prognosis sufficiently grave to demand the greatest care in the treatment of every case. Therapy must be general, including care of the food, drink, air, and personal hygiene; also local, prohibiting bathing, removing all crusts and applying, preferably, a dry dressing of powdered starch, talcum, lycopodium, bismuth, salicylic acid and menthol. Aristol and dermatol has also given good results in soothing the terrible itching, protecting the irritated surfaces and giving the epidermis a chance to repair. Ointments of lanoline or vaseline with oxide of zinc or bismuth may also be employed. But it is the union of the general and local treatment that brings success.

Tumours of the Placenta.

Albert has collected all the recorded cases of placental tumours, and adds particulars of 4 others. (British Medical Journal.) The 36 previously recorded tumours are classified as follows: Fourteen cases of myxoma fibrosum, 10 of fibroma, 9 of angioma, 2 of sarcoma, and 1 described by Merttens as hyperplasia of the chorionic villi. Albert criticises the naming of the last three. Sarcoma implies malignancy, and in the 2 cases so described there was no evidence at all of malignancy. He thinks these 2, as well as Mertten's tumour, would be better described as angioma fibro-myxomatosum. The author's 4 cases were all of the nature of angioma. The site of origin of these tumours is discussed, and is concluded to be the allantois, inasmuch as neither amnion nor decidua had anywhere any relation to the tumour. The cause of these tumours was given by Goodhart as the organization of blood clot; by Storch as a previous endometritis; by Hildebrandt as degeneration of placental villi under the influence of dilatation of vessels and stasis of blood in them. The author attributes the growth to a proliferative rather than a degenerative process in the villi. As to clinical symptoms, in 4 cases there was hydramnios, in 6 there was severe hæmorrhage, and in 1 eclampsia. The prognosis for the child is bad; 12 only out of 36 are stated to be normal, 10 were premature, 3 still-born. In 5 cases in which labour was at term the child did not reach the average weight. A good bibliography completes the paper.

Enteric Fever in India; Its Treatment on the Antiseptic Principle.

Dr. R. H. Quill contributes a paper to the British Medical Journal for May 14th, 1898, with this title. The following are a few points he brought out in his paper. He said:

I will state my case in this way: Take 100 cases of enteric fever, as that fever is observed in India, and treat them expectantly with a well arranged dietary and efficient nursing; from 70 to 80 of those cases will recover, leaving a mortality of from 20 to 30 per cent. Treat a second batch of 100 cases with the same dietetic and nursing arrangements, but instead of the expectant treatment, or rather in addition to it, employ the antiseptic system (which I may remind all readers of this paper does not solely consist in giving so many doses of an antiseptic mixture), and instead of a death rate of from 20 to 30 per cent. we shall have something about 10 per cent. So much and no more do I claim for the antiseptic treatment of enteric fever.

I will bring this paper to a close by stating explicitly and succinctly certain effects observed during the progress of the fever, which I ascribe to the method of treatment advocated in this paper:

1. Intellectual clearness of the patient, with very slight tendency to delirium or stupor. 2. Food invariably well assimilated. 3. Abdominal distension except to a very moderate extent, invariably absent. 4. Early cleaning and moistening of the tongue; dryness very rarely present. 5. Stools almost completely deodorised. 6. An offensive odour from breath or body of patient rarely observed. 7. Tendency to undue looseness of bowels rarely present. 8. Secondary complication of any kind never noticed. 9. The fever pursued its course "kindly," with little distress to the patient. 10. Convalescence rapid and complete.

I was unable to satisfy myself that: (*a*) The duration of the fever was lessened; (*b*) that there was any marked and continuous lowering of the thermometric range; or (*c*) that an occasional tendency to relapse was removed.

Laryngitis Exsudativa.

Schech classifies under this heading a number of affections in which there appears in the laryngeal mucous membrane exudation with more or less fluid contained in vesicles or hyperæmia with more or less swelling. (British Medical Journal.) In miliaria there are a number of the smallest vesicles on the epiglottis and aryteno-epiglottic folds, giving rise to the sensation of a foreign body. There is a similar eruption on the body. It may be necessary to apply cocaine or eucaine. Herpes is more frequent. If it occurs elsewhere on the body the diagnosis is easy; otherwise it may be mistaken for syphilitic plaques, acute pemphigus, diphtheritic deposit, etc. The pain is very considerable. Inhalations and insufflations of cocaine, etc., may be needed. Variola or varicella may affect the laryngeal mucous membrane. The prognosis is serious; tracheotomy or intubation may be necessary, especially in children, owing to the laryngeal obstruction. Foot and mouth disease may be accompanied by vesicles, which rupture and form ulcers. The diagnosis is very difficult. Aphthæ sometimes occur in the larynx in association with aphthæ of the mouth or vulva. Pemphigus rarely gives rise to vesicles in the larynx. It has sometimes even been limited to the larynx. It may be acute or chronic. As in herpes, relapses may frequently occur.

Ulcers do not as a rule arise. The prognosis is unfavourable. The patient may be exhausted by the relapses, and eventually die from marasmus or intercurrent disease. The pemphigus eruption is larger than that due to herpes or syphilis. Urticaria may certainly effect the laryngeal mucous membrane. The symptoms depend on its extent. The prognosis is generally good, but death may occur from asphyxa. The treatment consists of gargles, sucking ice, the injection of cocaine into the larynx if the pain is severe and tracheotomy in threatening stenosis. Lichen ruber planus is more common in the mouth and fauces than in the larynx. There may be no symptoms or discomfort felt in talking or swallowing. The disease is apt to persist. Arsenic should be given by the mouth, and sublimate and carbolic acid used locally. Impetigo hepetiformis is extremely rare in the larynx, as also are erythema nodosum and multiforme. Such cases have, however, been observed.

Paralysis of the Laryngeal Muscles in Typhoid and Typhus Fever.

L. Przedborski, of Lodz (Medical Bulletin,) in relation to the above, summarizes as follows:

1. Paralysis of the muscles of the larynx in typhoid fever is much more frequent than has hitherto been thought. This fact is unmistakably demonstrated if the larynx be examined in every case in the different periods of the disease, even when no laryngeal complication is indicated by outward symptoms.

2. This paralysis is equally frequent in the febrile period and in convalescence. In typhus fever laryngeal paralysis is more frequent during the febrile stage than in convalescence.

3. All the muscles of the larynx, adductors as well as abductors, are attacked with the same frequency.

4. The development of laryngeal paralysis occurs with a certain regularity. Only one of the adductors of the glottis is at first attacked, the abductors being afterwards involved in their turn, the picture of complete recurrent paralysis being then presented.

5. The successive appearance and disappearance of recurrential paralysis does not always occur according to Semon's law. Thus, paralysis which began in the dilators of the glottis sometimes disappears, and the constrictors are then attacked.

6. The progress of typhoid paralysis is most often acute, a cure occurring in the space of from one to three weeks. In typhus fever the affection has a tendency to become chronic.

7. The prognosis is favorable in typhoid fever, even when both recurrents are paralyzed. Complete cure, on the contrary, is an exception in typhus fever.

8. The virulence of the specific microorganism and its biological properties certainly play an important part in the advent of typhoid paralysis. As much may be said of the individual predisposition of each patient. Out of seven patients belonging to the same family, who became ill under the same etiological conditions, the writer observed laryngeal paralysis only in three cases, twice in the course of typhns fever and once in typhoid.

Aphorisms for Army Surgeons.

Dr. Nicholas Senn, in the Journal of the American Medical Association, July 9th, sums up an excellent paper on the Modern Treatment of Gunshot Wounds in Military Practice:

1. In theory and practice military surgery is equivalent in every respect to emergency practice in civil life. 2. The wounded soldier is entitled to the same degree of immunity against infection as persons in civil life suffering from similar injuries. 3. The fate of the wounded rests in the hands of the one who applies the first dressing. 4. The first dressing should be as simple as possible, including an antiseptic powder composed of boric acid, four parts; salicylic acid, one part; a small compress of cotton, safety pins, and a piece of gauze forty inches square. 5. Any attempt to disinfect a wound on the battlefield is impracticable. 6. The first dressing stations and the field hospitals are the legitimate place where the work of the hospital corps and company bearers is to be revised and supplemented. All formal operations must be preformed in the field hospitals where the wounded can receive the full benefit of aseptic and antiseptic precautions. 7. Probing for bullets on the battlefield must be absolutely prohibited. 8. Elastic constriction for the arrest of hæmorrhage must not be continued for more than four to six hours, for fear of causing gangrene. 9. The X ray will prove a more valuable diagnostic resource than the probe in locating bullets lodged in the body. 10. Gunshot wounds of the extremities must be treated upon the most conservative plan, the indications for primary amputation being limited to cases in which injury of the soft part, vessels, and nerves suspends or seriously threatens the nutrition of the limb below the seat of injury. 11. Operative interference is indicated in all penetrating gunshot wounds of the skull. 12. Gunshot wounds of the

chest should be treated by hermetically sealing the wounds under the strictest aseptic precautions. 13. Laparotomy in penetrating gunshot wounds of the abdomen is indicated in all cases where life is threatened by hæmorrhage of visceral wounds and the general condition of the patient is such as to sustain the expectation that he will survive the immediate effects of the operation.

Inherited Syphilis.

Dr. Jonathan Hutchinson (Archives of Surgery) lays stress upon the following points, based upon his own most extensive experience:—That the subjects of taint often grow up into healthy men and women. That complete exemption from other indications of taint does not exempt from the risk of an attack of keratitis. That it is not unusual for one child in a family to suffer very definitely, whilst all the others apparently escape. That it is very exceptional for any considerable series of children to suffer in succession from inherited taint. That the mother of one or more syphilitic children may herself remain throughout quite free from symptoms, and apparently in good health. That a condition of general arrest of growth may be one of the consequences of inherited taint. That it is possible for children born within dangerously short periods of the primary disease, in one or both parents, to entirely escape the inheritance. That although, as a rule, after keratitis, choroiditis, etc., the recovery is permanent, there are exceptional cases in which certain progressive changes continue. That it is by no means improbable that some who really inherit taint never, either in infancy or subsequently, show any symptoms. That the children of those who have suffered from inherited syphilis are usually quite healthy. That syphilitic infants may be suckled by their mothers, as a rule, without risk to the latter.

Some Pathologic and Clinical Phases of Gall Stones.

Cordier (Journal American Medical Association, Vol. 31, No. 2) concludes a practical and valuable paper on gall stones thusly:

1. Cholelithiasis is of frequent occurrence, and usually gives rise to symptoms either severe or obscure. 2. Cholesterin, as a gall stone producing agent, must be present in an abnormal quantity. 3. Cholesterin is, in a great measure, a product resulting from the destruction and disintegration of the epithelium of the biliary ducts and gall bladder. 4. Bilirubin-calcium, an insoluble compound formed by the union of bilirubin and the lime of salts, forms the nucleus of most of the stones formed in the gall bladder. 5. Jaundice, ptomaine poisoning and suppuration are late symptoms of cholelithiasis. 6. Dyspeptic symptoms, swarthy skin, uneasiness in the region of the gall bladder (congestion of liver) and loss of weight are some of the remote and local symptoms of the presence of gall stones. 7. Inflammatory diseases of the duodeum and bile passages are the most direct causative factors in the production of gall stones. 8. The surgery of these cases is especially difficult, and the inexperienced should not undertake it. 9. A ball-valve stone usually continues to give rise to symptoms until removed by surgical means. 10. Stones in the bladder, producing septic symptoms, should be removed.

The Occurrence of Menstrual Secretion in the Fallopian Tubes of the Human Subject, and its Significance.

Dr. C. J. Bond (British Medical Journal, June 4, 1898).

Examination of normal Fallopian tubes removed during the menstrual period showed "a quantity of blood-stained mucus much resembling menstrual fluid," while in those tubes removed during the inter-menstrual period "the contents were either clear or slightly opaque mucus from the adrupture of epithelial cells." This tubal menstrual secretion is a viscid, purple colored fluid, like a mixture of mucus and venous blood, and showing, under the microscope, red blood corpuscles and a variable quantity of leucocytes with some epithelial cells in various stages of mucoid degeneration. The tubal mucosa itself is altered, the fringe-like processes of membrane which cover the rugæ or villi are swollen and thickened in transverse diameter and are infiltrated with leucocytes which can be traced passing in from the muscular and submucous coats, up the villi, and between and among the ciliated epithelial cells." The epithelium itself is not shed or absent to any extent, but many cells show signs of mucoid degeneration. This is not so in the inter-menstrual period. This secretion seems to begin in the tubes before it does in the uterus and also to cease earlier. It is not a fluid regurgitated from the uterus, because it appears earlier or as early as in the uterus; there are definite changes in the Fallopian mucous membrane; post-mortem examination shows the fluid in bolh uterus and tubes; experiments on lower animals show no regurgitation, and regurgitation does not occur in women even in uterine disten-

tion from imperforate hymen. This blood may not be found in hydro-salpinx because of the sodium chloride in solution which breaks up the corpuscles and liberates the hæmoglobin, or possibly because the early pressure stops the secretion in diseased tubes. The occurrence of tubal menstruation may account for some tubal pregnancies or much dysmenorrhœa or tubal colic or for some cases of recurring local pelvic peritonitis and some cases of hæmato-salpinx where no tubal pregnancy can be found.

Gastric and Intestinal Antiseptics.

Riegner (Abstract in British Medical Journal, July 30, 1898) first refers to the various views held as to the possibility of disinfecting the contents of the alimentary canal. He has himself continued the experiments of Strauss upon gastro-intestinal antiseptics. Stomach and intestinal contents were placed in graduated tubes, and grape sugar in equal amounts added. The antiseptic was then added in known quantity in watery or alcholic solution, and more rarely in powder form when not soluble. The author gives details of a number of experiments. As regards gastric antiseptics, he concludes that sodic salicylate, $\frac{1}{8}$ per 1,000, menthol $\frac{1}{2}$ to 2 per 1,000, and thymol $\frac{1}{8}$ to $\frac{1}{2}$ per 1,000, have relatively high disinfecting powers. A medium disinfectant action is possessed by chinosol, chloral hydrate, soluble silver, and actol, and only a slight one by even large doses of steriform and ichthyol. As regards intestinal antiseptics, chinosol and thymol arrest fermentation in $\frac{1}{2}$ per cent. solution, and delay it in 1–6 per cent. Actol, bismuth salicylate, or bismuth beta-naphthol arrest it in 1 per cent., and delay it in $\frac{1}{4}$ per cent. Resorcin, chloral hydrate, silver, benzo-naphthol, and steriform are inferior to the agents above-mentioned. From experiments it becomes obvious that antiseptics behave differently in relation to the stomach and intestine. Thus menthol is an excellent gastric, but an inferior intestinal, antiseptic. These questions cannot be definitively settled by laboratory experiments, but must be determined by practice. Thus a disinfectant is useless if too poisonous. Again, a gastro-intestinal antiseptic must be insoluble. This insolubility is also a guarantee against intoxication. Extensive contact with the intestinal contents is desirable, and hence the antiseptic should be given in frequent and small doses. In motor insufficiency of the stomach salicylic acid, menthol and thymol have been shown to be of clinical value by Strauss. Among intestinal antiseptics Strauss has shown menthol to be worthy of recommendation. Thymol is inferior to menthol, and must be given on a full stomach to avoid irritation. Actol must be given in capsules or pills, which are not soluble in the stomach. Both bismuth salicylate and bismuth beta-naphthol are worth trying in flatulency. Sodic salicylate and chinosol are too soluble. Washing out the stomach and bowel is an important measure. Salicylic acid, menthol 0.25 g., thymol 0.1 g., may be added to nutrient enemata. The author comes to the conclusion that these antiseptic agents have a practical if somewhat restricted value.

Noma of the Genitals, with the Presence of Diphtheria Bacilli.

Medicine, Aug., 1898, published an abstract of a paper in which Freymuth and Petruschy report a case of noma genitalium on which the bacillus diphtheriæ was found. The patient was a sickly little girl suffering primarily from capillary bronchitis. Attention was attracted to the vulva; both labia majora were reddened and indurated; the entire area from the anus to the mons veneris, including the labia minora, the introitus vaginus, the clitoris, and the anterior and posterior commissures, as well as the perineum, was covered with a greenish-black necrotic membrane. Recovery followed the removal of this membrane and the employment of diphtheria antitoxin.

Two forms of gangrene of the vulva of little girls may be noted, according to Henoch. The first exists as a very hard swelling of the labium, finally breaking down, and penetrating more and more deeply, with the formation of a diphtheritic ulcer. The second form begins with a dark livid redness of the labium and adjacent mucousa, the epidermis of which becomes covered with a dirty gray or bloody ulceration; the labia are indurated, hard, and swollen.

The University College of Medicine, Richmond, Va., has just added to its dental department Dr. W. E. Walker, of Pass Christian, Miss. Dr. Walker is president of the Southern Branch of the National Dental Association.

The growth of this college in equipment and number of students has been remarkable. In the past five years over $100,000 has been spent in buildings, and the number of students in that time has grown from 118 to 284. The number of professors and instructors now embraced in the faculty is fifty-six.

The Etiology of Syphilis.

Van Niessen, (International Medical Magazine, July, 1898), in an exhaustive article embodying the result of much original work, states that: (1) Syphilis is a chronic infectious disease of the blood, the contagium reaching the blood from without by means of the lymphatic vessels, and in turn is brought to the other tissues of the body from the blood by means of the lymphatics. (2) The contagium of syphilis, in every case and in every stage of the disease from the moment of its entrance into the blood is capable of microscopical demonstration by staining and by cultivation. In many csses it can be found in the urine and milk; the semen, the sputum, the sweat, and the excrement may also contain the germs of the disease. (3) The contagium is not found in cases other than syphilis, or in disease complicated with it. (4) The virus of syphilis is a pleomorphous form of bacillus which stands in close relation to the higher organized fungi such as the actinomycetes of the class *Dematium* and *Cladosporium*. (5) The detection of the etiological factor of syphilis in the blood is an absolutely sure criterion for the diagnosis of syphilis, and is therefore of the highest diagnostic importance in disputed cases requiring differentiation. (6) In all its stages syphilis is inheritable and communicable. This applies also to rabbits which are capable of being infected experimentally with syphilis. (7) With the therapeutic means known up to this time syphilis is absolutely incurable. Relative healing merely denotes a latency of the disease. It is therefore of the greatest importance to mankind that a really curative agent be discovered.

The Surgical Treatment of Intestinal Tuberculosis.

Dr. Nicholas Senn contributes to the Journal of the American Medical Association an article of unusual interest. He says there is hardly an organ in the body which, when the seat of a localized tubercular process, has not been exposed and subjected to direct treatment with a fair expectation of removing or limiting the further extension of the disease. The intestinal canal is one of the last territories opened up for successful surgical invasion. The results obtained by the surgical treatment of localized intestinal tuberculosis are such as to encourage further effort in this direction. Diffuse primary tuberculosis remains, for the present, a surgical *noli me tangere*. Surgical intervention is also contraindicated in secondary intestinal tuberculosis, in all cases in which the primary disease, usually pulmonary tuberculosis, is far advanced and constitutes in itself an imminent source of danger to life.

Dr. Senn has several methods of operating, namely: (1) Abdominal section and iodofumigation. Tapping and injection of from seven cubic centimeters to fifteen cubic centimeters of a three per cent. of iodoform glycerin emulsion repeated six or eight times, at intervals of from one to two weeks, often succeeds in curing cases of peritoneal tuberculosis. This method has a limited application in the treatment of intestinal tuberculosis, when the disease is too extensive for more radical measures, and no obstructive lesion is indicated by the symptoms or discovered at the time of the operation. (2) Enteroplasty. Plastic operations are indicated in solitary circular strictures following the healing of a tubercular ulcer and constituting the cause of intestinal obstruction. (3) Enterectomy. The most radical treatment of intestinal tuberculosis in appropriate cases is resection followed by circular suturing. Resection is indicated in isolated intestinal tuberculosis as long as the swelling is movable and the disease gives rise to symptoms of obstructions. If, however, the disease is no longer limited to the organ primarily affected, or if it is complicated by advanced pulmonary or general tuberculosis, entero-anastomosis should take the place of a radical operation.

Further Dr. Senn says: "There can be but little doubt that with an increased knowledge of the etiology and pathology of intestinal tuberculosis surgeons will be induced to resort to operative treatment more frequently in the future, and that with further improvements in the technique of intestinal operation the surgical treatment will yield more encouraging results."

Digestion Fever in Children.

Treatment, July 14th, 1898, contains an abstract of a paper by Comby describing under this name an intermittent fever which is produced by the absorption of faulty products of digestion, and is most frequently observed in children between three and ten years old. Nearly all of the children thus affected are suffering from chronic dyspepsia, and had been hand fed; most of them are also rickety. One frequently finds these children insufficiently nourished and exhibiting the symptoms of atonic dyspepsia and distension of the stomach. About eighty per cent. of the cases of digestion fever occur between the months of May and July, probably, as Grasset thinks, owing to the ingestion of large quantities of water. It

is more frequently found in boys than in girls.

Without any definite symptoms, the children feel ill, look pale, are anorexic, and dull. Two or three hours after meals their temperature rises to a moderate height (100 deg. to 101 deg. F.), their sleep is disturbed, heavy, they perspire much in their sleep, and dream often and bad. In the morning the children wake up with normal temperature, but look pale and ill. These attacks recur with more or less regularity and frequency. The fever sometimes reaches 102 deg. to 104 deg. F., and usually lasts for a couple of days. Exacerbations of this kind are fortunately rare. Liver and spleen are not enlarged; there is constipation and utter loss of appetite. Voracity is rare, whereas the children frequently complain of much thirst.

There is a strong tendency for this affection to run on to troublesome gastro-enteritis, or even membranous enteritis.

Regulation of diet is the most important feature in the treatment of this affection.

The children must not be given wine and hot and spiced dishes, sweets, cheese, or tea. They must not eat beef or pork. Toast, soup, spinach *a la puree*, stewed fruit, sheep's or calf's brain, veal or mutton cutlets, roast or boiled fowl, or pigeon, for the mid-day meal, is all that ought to be allowed. There ought not to be more than three meals a day, of which the mid-day meal must be the principal one. No more than half a pint of milk or water may be allowed for a drink at each meal.

Quinine and alcoholic tonics make the condition only worse. If the constipation cannot be overcome by regulatien of the diet, then Comby orders the following powder, of which he lets one be taken twice daily before meals:

℞ Sodii bicarb..... gr. 5
Magnes. levis..... " 10
Naphthol..... " 3
Pepsin..... " 1½
Ext. nux vomica..... " ⅛
Da. in wafers; tales doses twenty.
S. One cachet before the morning and even-meals.

Or—

℞ Sod. bicarb..... gr. 4
Magnes. levis
Pulv. rhei.....aa gr. 3
Pancreatin..... " 1
Ext. nux vomica..... " ⅛
Da. in wafers; tales doses twenty.
S. As above.

If diarrhœa be present, then magnesia and rheum may be replaced by bismuthum salicylicum. If the tongue is much furred and the motions fœtid, the calomel in doses of one-sixth to one-third of a grain, with five grains of saccharum lactis, repeated every two hours four or five times a day for three days, will be found very useful.

Some Remarks on the Surgical Treatment of Acute Infections of the Uterus.

Dr. E. C. Dudley, in the Clinical Review, states that when the systemic condition is grave and the nervous system shows profound ptomain poisoning, a large proportion of cases under any treatment will terminate fatally. The following important questions arise:

1. Is there simple absorption into the circulation from some focus of decomposition in the uterus? Is the toxemia due to the products of a decomposing foreign body, such as a clot of blood, a fragment of placenta, etc.? If this is the case the indication is clear and imperative to remove the putrefying mass, wash out the endometrium, and establish drainage. 2. Is the uterine mucosa the seat of an infection and is it the distributing point of bacteria to the appendages and peritoneum? 3. Have pus emboli been carried through the circulation from one focus of suppuration to set up other foci in different parts of the body and thereby produce metastases above?

If the second and third question be answered in the affirmative it is then necessary to decide whether the infection has extended beyond the uterus, for if it has extended to the other pelvic organs surgical treatment of the intra-uterine infection alone would be useless.

Milder cases may be left to palliative and expectant treatment. The graver cases have, in most instances, passed beyond the range of intra-uterine treatment before the question of operative interference is forced upon the surgeon.

What surgical measures, if any, should be used to prevent the spread of dangerous acute uterine infection which is still nearly or quite confined to the utrus?

A through curettage with a sharp curette is recommended. This measure, however, should be limited in its application. The only cases in which it should be preformed are those which will otherwise result in dangerous spreading of the infection.

All admit the practical difficulty, not to say impossibilities of selection so as to limit the operation to those infections which are really dangerous and still confined to the uterus. It is questionable whether the cause of grave puerperal, gonorrheal, or traumatic infection is often arrested by the procedure, and yet the operation has repeatediy given rise to fatal results. On the other hand, expectancy and palliation will often be re-

warded by the subsidence of grave symptoms and final recovery. There can be for a surgeon no greater cause of regrel than the fact that he has exhausted the resisting forces of his patient by a dangerous and questionable measure, which in itself may have contributed to the necessity of a more radical operation, and that while by an inefficient operation he has been lulling himself into a sense of false security, the infection has been gaining irresistible force. If urgent indications arise the only hope of recovery may be in abdominal or vaginal section and drainage, or the removal of the infected uterus, together with its appendages.

Conservatism in the Use of the Stomach Tube.

Dr. A. L. Benedict, in the Medico-Surgical Bulletin, June 25th, 1898, concludes an article on this subject as follows:

1. Don't use the stomach tube simply because you want to be considered scientific and up to date. 2. Don't withdraw stomach contents for examination unless you are prepared to examine them. 3. Don't discard external means of physical diagnosis because you have a stomach tube. 4. Don't expect too much from diaphanes. electric buzzers, buckets, complicated tubes, etc. All of these have their uses, but are available in very rare cases. 5. Don't pass the tube without first examining the mouth and throat, and also the heart and arteries, and at least inquiring as to pregnancy, piles and other possible complications. 6. Don't pass the tube as a means of treatment unless you know precisely what you wish to accomplish with it. 7. Don't introduce a weight and bulk of water which you would consider injurious if swallowed. As a rule don't introduce more than a pint at once and never more than a quart. Don't be deceived by the ball-valve action of a particle of food or any other cause which may allow water to remain in the stomach. Make sure that you withdraw as much as you introduce, except that you may allow a little for leakage through the pylorus, or possibly absorption. Remember that the more a stomach can hold the less it ought to. 8. Don't imagine that the gastric douche will cure all the diseases of the stomach; you would laugh at a gynecologist who held such a view about the vaginal douche. 9. Don't imagine that a stomach is doing well until it can digest plain, but varied, diet without mechanical interference. Don't speak of a case as cured until he can indulge in all the ordinary food without medical aid and without injury. 10. Don't let the patient learn to pass the tube himself. This rule holds for his benefit as well as yours. 11. Don't fail to use the tube or to have it used when the indications outweigh the contra-indications.

Perforation in Typhoid Fever--Successful Operation.

Cases of successful operations for perforation of the intestine in typhoid fever are as yet but rare. Several points are worthy of note in a case recorded by Dr. Handford and Dr. Anderson, of Nottingham. (The Hospital, July 30th, 1898.) The operation was not done till 22½ hours after the occurrence of the perforation. The incision was made in the middle line; there was gas and fœculent matter in the peritoneum; the whole of the small intestine was deeply congested and covered with patches of lymph; the opening not being at first visible, the cæcum was found, and the ilium was traced up from it, the perforation being found within three feet; the orifice was about the size of a bean. The loop was pulled out of the abdomen, the opening was closed by Lembert's sutures of fine silk without any paring of the edges, the whole of the small intestines was then, loop by loop, pulled out, wiped with 1 in 2,000 biniodide solution, and replaced, the loins and pelvis then being treated in the same way. No douching was used. The abdominal wound was closed without drainage. During recovery there was an attack of suppurative nephritis, probably due to a septic infarction, otherwise the patient went on well. This case may be compared with one recorded in the last volume of the Medico-Chirurgical Transactions. This patient was under the care of Dr. Lauder Brunton, and was operated on by Dr. Bowlby. The opening in the gut was surrounded by a good deal of thickening, but it was successfully closed by Lembert's sutures. The abdomen was irrigated and the pelvis was drained. Recovery was uninterrupted. In a case reported at the same meeting which was under Dr. Herringham, and was also operated on by Dr. Bowlby, symptoms of perforation occurred during convalescence, and laparotomy was performed; no perforation, however, could be found, and the patient recovered. It was curious in this case how accurately the symptoms of perforation were simulated, and it is interesting to note that no harm followed the exploration. Which teaches a lesson. Of course it would be easy enough for a careless operator to kill a patient by a mere exploration, and even a careful man may sometimes after opening the abdomen be tempted into some operative error, but we should be very

much surprised if the records of our great hospitals for the last half-dozen years showed many cases in which a mere exploration performed properly and amid proper surroundings had done harm.

Fractures of the Skull.

Pope, in the International Journal of Surgery for April, 1898, calls attention to many interesting facts regarding this condition, and suggests the following for consideration: (1) Trauma in its various modes of action, producing fractures of various kinds and degree; (2) local sequelæ such as hemorrhage, exudation, and inflammation; and (3) post-traumatic nervous sequelæ.

Complicated and compound fractures of the skull present danger in two directions: (1) danger that arises from direct injury to the brain and membranes, and (2) danger of infection of the wound from within or without.

Trauma acting upon the skull usually affects the cranium in two general ways, with variations: (1) Local depressed fractures occupying a reasonably small area. Those fractures are, as a rule, not compound, and become so when they are produced by some sharp instrument. (2) Extensive fractures of the vault or base that are produced by trauma, so directed as to bring about a bursting effect, and in their results we find wide-spread injury to the brain and membranes.

Danger from serious fractures of the cranium, be they simple or compound, lies not in the fracture itself, but in the injury to the nerve elements or their destruction by subsequent infection or in the production of subsequent neural trouble, such as focal epilepsy. One of the latest works upon surgery, and another upon neurology, distinctly advise, if moderate symptoms of cerebral trouble develop, or if the cerebral symptoms are subsiding, or if they are known to be present, the treatment should be "expectant" (?), and interference by trephining should never be resorted to until the development of the later cerebral symptoms. Compound fractures, as a general thing, are opened and cleaned, trephining not often resorted to, especially in fractures of the base where expectant treatment is carried out; and the author's experience, limited though it be, and considered largely from the neurological standpoint, is against delay in operative interference. Trephining under aseptic precautions is in no sense a dangerous operation, and we can feel safe in desperate cases that the relief in intracranial pressure will help the patient. Summing up shortly his experience on the subject, he says:

1. Operate in all cases of fracture of the skull, basilar or compound, and preferably in simple fractures. 2. Expectant treatment, in his opinion, is dangerous, permitting injury to the nerve structures. 3. Danger does not exist in fracture *per se*, but in subsequent injury to the nerve elements and tissues. 4. Failure to trephine and immediately remove the existing pressure, depression, hemorrhage, inflammation, or septic infection may result in the development of focal epilepsy and other cerebral diseases. 5. Little or no danger results from the operation. 6. These rules are doubly applicable to fractures of the base, owing to the danger to vital structures lying there.

Locomotor Ataxia in its Modern Aspect.

There being no syphilitic exudation in true tabes, antisyphilitic treatment is uncalled for. Diet, hygiene, rest, are the main factors in the successful management of the disease. Digestion, assimilation, elimination, must be promoted. Climate, medicines and electrotherapy are of distinct value.

Distressing symptoms, the "lightning pains," "ataxia," etc., are to be alleviated without impairing the general nutrition. Opiates had better be avoided.

Rest in bed is a valuable measure when obtainable. The patient should sleep much and work little. When complete rest is not practicable, a few extra hours daily in the horizontal position is advisable.

The diet should be liberal—meats, fats, milk, water in abundance, and fruits, with a minimum allowance of starchy and saccharine foods. Alcohol is to be prohibited.

The patient should wear warm clothing, any if possible spend his winters in a warm climate. Measures addressed to the elimination of auto-toxins generally by the skin, kidneys and bowels should be instituted.

Drugs of more or less use in the treatment are those of nutritional value, mainly phosphorus, iron, cod-liver oil, with tonics such as strychnine.

For the lightning pains aluminum chloride (dose, two to four grains in water) is a drug of considerable value. Dr. Gowers originated its use for this purpose.

Electricity is of a distinct value in a large proportion of cases. Ordinary faradism is useless, galvanism better. The writer's experience has led him to value highly that form of electricity known as the "sinusoidal" current. It is a current of "high potential" (voltage) rapid alteration (480 to 1920 per

second), and comparatively small "quantity" (amperage). Its application is simple and controllable, as well as pleasant to the patient. It is administered by means of a "foot-plate" and a neck electrode for from five to fifteen minutes every alternate day for six weeks. Under its use, with simple hygiene and often without drugs, the lightning pains ceases, the ataxia of a gait and station disappears, and the well-being of the patient is promoted. These effects would seem to indicate an actual improvement in the nutrition of the peripheral sensory neuron, with capacity for better function in some, possible restoration of damaged nerve endings in others. This six weeks' course of treatment may be repeated once or twice yearly, as indicated, with advantage to the patient.

Patient treated by the foregoing methods have been under observation for nearly two years without relapse of pains or ataxia, and with full capacity for ordinary business affairs. All cases are improveb, some more than others, depending on the stage and extent of the disease. Many additions to cases formerly cited might be made, but space and time forbid.

In conclusion, it may be stated that, by reason of clearer conceptions of its pathology, leading to a more rational therapy, locomotor ataxia becomes a more hopeful disease to treat.

Treatment of Varicose Veins.

C. G. Cumston divides varicose veins as follows (Treatment, July 28, 1898):

1. Dilatation without pathological changes in the wall. These may disappear after the cause is removed, *e.g.*, pregnancy or abdominal tumour. 2. Dilatation with hypertrophy of the middle tunic. If such a vein is cut it remains gaping, and causes severe hæmorrhage. 3. Marked morbid changes with hypertrophy. The middle tunic becomes thin, and readily gives way, leading to saccular dilatations preventing the valves from coming in contact. Later on the walls lose their elasticity; the cellular tissue becomes infiltrated, the skin thick and adherent, or thin and ulcerated. Pigmentation occurs from capillary extravasation.

The diagnosis in cases of deep-seated veins is sometimes difficult. Cramps and neuralgic pains, and tingling sensation in the calves, should lead to a suspicion of deep-seated varicose veins.

The complications are: (1) hæmorrhage; (2) varicose ulcers; (3) thombosis with disintegration of the clot, causing emboli and pyæmia.

The author recommends Trendlenberg's operation, which is based on the fact that most varicose veins of the lower extremity are connected with the long saphenous veins from any cause causes the blood column in the saphenous vein to extend without interruption to the right heart; hence the treatment by Trendlenberg's operation of ligature of the vein in two places, and section of the vein between the ligatures.

The incision is from 7 to 10 cm. over the vein at the junction of the lower and middle third of the thigh. The vein is exposed and all branches tied. Ligatures are placed on the vein at each end of the incision, and the part between resected. The varicosity rapidly decreases, and ulcers, if present, cicatrize in a short time. An elastic stocking is worn for a few months.

The author quotes seven cases treated by this method, with good results.

Cardiac Lesions and Biliary Colic.

Potain draws attention to the occurrence of cardiac lesions in the course of cases of biliary colic and other hepatic affections. (British Medical Journal.) In a patient under his care suffering from biliary colic, very great increase of cardiac dulness was noticed, with absence of any of the usual causes. This condition has been noticed by Potain on several occasions, and was first described by him in 1878, in reference to a patient also suffering from biliary colic, who presented a high degree of tricuspid regurgitation. A little time after, this condition had quite disappeared, the hepatic symptoms having subsided. Potain points out that this association of cardiac dilatation and tricuspid incompetence is a variable one, and it sometimes happens that the cardiac lesion becomes permanent, be it from its frequent occurrence, or because the biliary condition may be constant. This relation of cardiac dilatation to affections of the biliary system is more difficult to make out in simple cases of catarrhal jaundice. The writer, however, quotes Barié as having recorded several cases of this kind in which the cardiac complications disappeared so soon as the catarrhal state of the bile ducts cleared up. It may be asked if a similar complication exists in cases of cirrhosis, and it seems that the rule holds good for cases of hypertrophic cirrhosis accompanied by jaundice. On the contrary, Potain has not noticed it in instances of common cirrhosis. As to the mechanism of this condition, it has been explained in various ways. The suggestion put forth by the writer is that the strain on the right side of the heart is due to a spasmodic condition of

the pulmonary capillaries. In support of this there is a certain amount of experimental evidence, for Franck and Arloing are quoted as having shown that irritation of the bile duct raises the blood pressure in the pulmonary artery. It would seem to be a necessary factor that the mucous coat of the bile vessels should be intact, as it appears that in ulcerated conditions there is an absence of reflex influence on the more distant organs.

Phosphorus and Morphine Poisoning.

Schreiber states that potassic permanganate has been recommended as a remedy against both acute phosphorus and acute morphine poisoning, and in some such cases it has given very good results. (British Medical Journal.) The oxidation products of phosphorus and morphine are non-poisonous, at least in the doses in which they are then likely to be present in the stomach. The only disadvantage of potassic permanganate is that the potassium salt is poisonous, and therefore cannot be given in large doses. The author has made experiments to ascertain whether the sodium salt, which can be used in larger doses, would answer as well. Thus 2.75 g. of potassic permanganate killed a rabbit, whereas the same dose exercised no poisonous action upon another similar animal. Sodium permanganate is, however, not harmless; the maximum dose for a medium-sized dog is 4.5 g. Strong solutions are especially to be avoided, as they act as corrosives to the gastro-intestinal mucous membrane, and produce fatty changes in the liver and heart, and also renal irritation. The good effects obtained by the sodium salt were shown to be not inferior to those of the potassium salt. Although experiment shows that the administration of the antidote suffices, yet the stomach should be previously washed out with a 2 per cent. sodium permanganate solution. This should be done even if the poison has been taken some hours previously. After this, half a litre of the same solution is taken, or it may be passed through the tube into the stomach. The washing out should be repeated again in a few hours. If washing out is not possible, apomorphine should be injected, as emetics administered by the mouth interfere with the permanganate. Where the emetic must be given by the mouth, half a litre of sodium permanganate is given immediately afterwards and then another half litre after the vomiting. The usual remedies must not be omitted if there is any evidence of absorption having taken place from the stomach, because permanganate is of little service after the poison is absorbed.

The Gonococcus as a Cause of Diseases of the Uterus and Adnexa.

Dr. Winslow Anderson, (Western Medical Review, June 15, 1898,) says the prevalence of gonorrhea and its ravages are brought to the notice of the gynecologist almost daily. The gonococcus infects not only the vulva, urethra, bladder, rectum, vagina, and uterus, but also the Fallopian tubes, ovaries, and pelvic peritoneum, and may lie dormant in the tissues—notably the vulvo-vaginal, cervical, and utricular glands —for years, ready to infect or reinfect any healthy mucous membrane. Undoubtedly it is the prime cause of sterility in both man and woman. One of the great causes of dysmenorrhea is the gonococcus and pyosalpinx, pelvic cellulitis, and oophoritis, and the consequent salpingo-oophorectomy can be traced to the gonococcus with its followers, the streptococcus and staphylococcus.

Treatment of Malarial Fevers.

M. C. Nanjunda Row, of India, (New York Medical Journal) advances a method of treating malarial fevers. According to this method, the dose of quinine required is not a large one; and the writer has had no occasion to give more than a gramme (fifteen grains) of quinine sulphate in one dose in even some of the refractory cases that he has had to deal with in those parts, and he has not met with a single case in which any ill effects of quinine were manifested—not even vomiting which so frequently follows the administration of large doses of quinine.

The method is one advocated strongly by the late Dr. George Smith, once the senior physician of the General Hospital, Madras, and it depends on the fact that the best time for administering quinine is when the pathogenic germs are in the most weakened condition, and not when they are in a vigorous condition. Dr. George Smith, with a view to impress on his students the importance and reasonableness of his method of treatment, used to teach them graphically that the best treatment for malarial fevers was to "strike the enemy (malarial germs) when he is weakest, with the strongest weapon (a fairly large dose of quinine)," and that in all cases of malarial intermittent fevers the actual attack of rigors and fever was the result of the war that was taking place in the system between the malarial germs and the phagocytes, and the cessation of fever was an indication of the defeat of the enemy, caused partly by their destruction and partly by their being weakened. The interval indicates the rest and the time re-

quired for the growth of the younger germs and for the recovering of the lost strength by the weakened ones for a further attack, so that the enemy is in his weakest condition as soon as the fever begins to subside; and it is then that a large dose of quinine, the specific *par excellence* for malarial disease, is to be administered and its effect prolonged by frequent smaller doses at intervals of from four to six hours for some days after that. Whatever the explanation may be, such of us as have followed his directions have yet to find a case which has not yielded to this method of treatment.

The actual method employed by the writer in all cases of intermittent fevers is never to give quinine either before or during an attack. He always waits for the attack to subside before giving any medicine; and during the attack he allows the patient to have any hot drinks he may like, such as coffee, tea, or warm milk, or iced water or milk if preferred. The writer never gives any antipyretics to bring down the fever, as he has always found that the reduction of fever by means of an antipyretic prevented somehow the full action of quinine, and recurrence of the attacks has been common only in such cases. But when the fever begins to subside in the usual course, and the patient begins to perspire freely and to feel free from headache and other uncomfortable symptoms, the writer gives him from ten to fifteen grains of sulphate of quinine for the first dose, and then five grains every four, five, or six hours after that (in many cases not more than four times a day) for a week at least, after which time he continues quinine in two-grain doses with four or five minims of Fowler's solution (liquor arsenicalis, B. P.) twice a day after meals for a fortnight longer.

If quinine is administered in this way it is very rarely that another attack occurs. In the writer's experience of many cases of malarial intermittent fevers of all types, he has not had more than five or six cases in which the attack recurred more than once, and those rapidly yielded to the quinine similarly administered again. Larger doses than fifteen grains, as advised by Dr. Ballagi and others are perfectly unnecessary and are chiefly instrumental in producing many of the ill effects of quinine poisoning, so to speak. As a general rule Row prescribes only ten grains of sulphate of quinine for an adult for the first dose, and it is only in rare instances that he gives fifteen grains, and he has had no occasion to use any larger dose than this, as by the use of this method the very next attack is invariably prevented.

The form in which he gives quinine is that of soft gelatin capsules containing measured quantities, or that of freshly made pills with glyceride of tragacanth, or that of wafers. It is only rarely he orders it as a mixture or solution, more especially in cases of children and others who cannot swallow a pill, however soft and small it may be. Though the solution of quinine does, undoubtedly, act much sooner and much more efficiently, it has two important drawbacks, viz., its bitter taste and its producing vomiting oftener than the capsules, wafers, or pills, freshly prepared. Certainly, as Dr. Ballagi says, compressed tablets and hard-coated pills are to be condemned, for he knows of a case in which a brother practitioner prescribed seven of these hard-coated pills of two grains each, and six of them were passed out in the patient's motions two days after, intact.

Gout and Rheumatism in Relation to the Seashore and Salt Water Baths.

Dr. Edmund Hobhouse (British Balneological and Climatological Society, April 27, 1898) introduced a discussion on this subject. (British Medical Journal).

He considered that prolonged observation was required, and except in the acute forms it was difficult to determine the effect of any particular set of circumstances. Chronic rheumatic arthritis was a separate disease, which should be dealt with separately. It seemed doubtful whether sea air in itself had any direct effect apart from the question of soil and general meteorological conditions. It was also largely a question of season; the seaside was drier and freer from fogs than the country during the autumn and winter, but more windy in the spring. Individual cases varied greatly; hence the interrogation of a large number of patients and the tabulation of results was the best way to obtain evidence. Collective investigation on this point might yield valuable results. Only with regard to acute and subacute cases were statistics of any value to be obtained, and these mostly came into hospital. Statistics at Brighton showed somewhat less acute and subacute rheumatism than in London—7.2 per cent. of all medical cases, as compared with St. Bartholomew's, St. Thomas's, and the London hospitals about 8.3 per cent. At Hastings it seemed to be a little more, but the statistics were for a short period only. At Plymouth there was a good deal lsss—4.51, but the chronic cases were much more numerous. These figures seemed to show the sea had little influence on the acute and subacute forms, but, generally speaking, marine climates were not indicat-

ed in the treatment of rheumatic affections, though patients weak and anæmic after acute attacks might be greatly benefited. Rheumatism in children was probably benefited by the sea—an important point, on which investigation was desirable. As to chronic conditions, lumbago, sciatica, myalgias, etc., it was impossible to estimate their comparative prevalence by the sea, but it seemed to be agreed that they were very common in most resorts. Whether they were benefited or not depended on the place chosen, the time of year, etc. Gouty patients with any active symptoms were better away from the sea; they could live there but had to be extremely careful as to diet and alcohol. Sea air predisposed to what Murchison called "lithæmia;" this applied to all kinds of gouty patients. Rheumatoid arthritis was probably not commoner by the sea than elsewhere, but some rheumatoid patients felt more pain there. Salt water baths were unquestionably of great value, especially in subacute rheumatism, but the question was whether their value was due to the heat, or to the salt; probably it was chiefly to the latter.

Repression of Consumption.

Dr. W. Robinson (British Medical Journal, July 23, 1898).

Preventive measures fall under two heads: first, those belonging to the realm of general sanitation, which improve the dwelling, the workshop, and the bodily conditions of the people generally. It is only during the last sixty years that beneficent measures for this purpose have been put in force, and they have reduced the mortality from consumption in England and Wales, from 38 per 10,000 living, in 1838, to 14 in 1895. The second means of prevention must be the destruction of the sputum, and the removal of those affected in the later stages if they cannot be sufficiently isolated at home, that is, if they are dangerous to others owing to overcrowding, etc., to a home for consumptives, free from the taint of pauperism, and provided by the sanitary authority. Notification should be in force, though the sanitary officer must never come between the physician and the patient. There is no need to treat the sufferer as a leper. In the open air he is practically harmless, as the bacilli in the sputa are soon destroyed by sunlight and fresh air. After a room has been vacated by a consumptive it should be thoroughly cleansed, disinfected and papered by the authority. Leaflets, stating plainly the nature of the disease, its mode of spreading and simple directions to prevent its spread, should be distributed freely. Spittoons should be placed in all public places. To stop the spread by meat and milk we must urge the provision of abattoirs; the systematic inspection of meat, and the destruction of tuberculous meat; the careful regulation of cubic space, light, and ventilation in all cow byres; the testing of milch cows by tuberculin by an appointed veterinary surgeon, and the killing of tuberculous cows. The sources of all milk brought into a town should also come under the supervision of the authority in whose district it is for sale, and all dairies and milkshops should be stringently looked after. By means such as these the death rate has been brought down in New York from 4.42 in 1886 to 2.85 in 1897, and similar good results have followed in Brussels and Berlin.

Passing to the treatment of consumption, Dr. Robinson insisted on the curability of the disease. He said: We can all look back on many cases in which the disease has become quiescent. The records of the *post mortem* room also teach us how large a proportion of those dying of other diseases or of injuries show evidence of healed tuberculous lesions in the lungs. Fresh air and sunlight alone mean death to the bacilli and life to the patient. It is now nearly forty years since Brehmer established at Gorbersdorff, in Silesia, the first sanatorium for the open air method of treatment of consumptives, and the results obtained there have been excellent. Brehmer's statistics of over 5,000 cases show that 27.8 per cent. of those in the first stage were cured, and 6.83 per cent. of those in the second stage; whilst other 31 per cent. in the first stage were nearly cured, and 14.6 per cent. in the second. Climate only exerts a secondary influence on the results of treatment. The four main conditions invariably present in the sanatoria are: A warm, dry soil; pure fresh air, free from dust and organic impurities; sufficient fine weather, or sufficient shelter from bad weather to allow of an outdoor life; and adequate protection from wind and rain. All these conditions may be had in our own country. The experiment has been tried with gratifying results, at Cromer. For some time past I have been treating phthisical patients on this plan as far as the limited means at my disposal would allow, and the results have been most encouraging. I know that neither heat nor cold, nor rain, nor wind, nor mist need deter a patient from being out of doors all day long provided he be sufficiently protected by shelters and wraps, and if need be, given a hot water bottle to his feet. The patients are carried out on stretchers if feeble or feverish, and kept

lying down and well wrapped up. After a few weeks' treatment the temperature subsides, the cough lessens, the expectoration diminishes, and the physical signs improve. This treatment, however, can only be carried out in an institution specially built for the purpose, and under immediate daily supervision by a medical man, aided by well trained nurses. The open air method cures (1) by the tonic influence of fresh air; (2) by preventing the patient from reinhaling his own tuberculous dust; and (3) by the bactericidal action of sunlight and of the ozone in fresh air. The influence of good and abundant food, hygienic conditions, and careful nursing in sanatoria tend greatly to cure. Phthisis in the well-to-do lasts four times as long as in the poor in fatal cases. In sanatoria also the patient learns the best way of taking care of his heallth and how to prevent his sputum from becoming a danger to himself and to others.

Dr. Robinsoh concluded by pointing out that sanatoria for the reception of consumptive patients belonging to the poorer classes were springing up all over the continent and in the United States, and urged that England, which was the first to build special hospitals for consumption, should not lag behind in this matter.

Syphilis of the Uterus.

Legrain (Edinburgh Medical Journal) reports three cases of syphilitic disease of the uterus. (1) The first case, aged fifty, had a uterus enlarged to the size of a seven-month fœtal head, the fundus being three fingers' breadth above the pubis. The cervix was not discernible. The patient was cachectic, and suffered from greenish-yellow discharge. No ulceration. Anti-syphilitic treatment brought the uterus to its normal condition. (2) The second case, aged fifty-four, suffered from metrorrhagia for four or five months, resulting in anæmia. The uterus was uniformly enlarged, but not fixed. Cervix normal; gumma on tibia. Under iodides the uterus resumed its normal size, the metrorrhagia ceased, and the anæmia improved. (3) The third case, aged 38, was diagnosed as one of interstitial fibroids. Patient suffered from metrorrhagia, anæmia, and loss of flesh. Uterus enlarged to two fingers breadth above the pubis. Cervix hard and enlarged, but not ulcerated or eroded. Papular syphilide on knees and elbows. Treated by calomel injections of $\frac{1}{8}$ grain daily. In six days the rash was gone, the anæmia better, and the uterus smaller. Under a mixed intermittent treatment of proto-iodide pills and iodide of potassium the uterus soon became normal.

The author considers these cases to be parenchymatous and fungous metritis, due to diffuse cell infiltration of the uterus rather than gummata. He thinks some cases diagnosed as fibroids are really syphilitic.

Municipal Control of Milk Supply.

Dr. Heath, at the New York State Medical Society discussed this subject. He embraced the following features:

1. All milk houses should be of sufficient and proper size and should have light and ventilation, complying with the rules of hygiene pertaining thereto. 2. They should be constructed of such material as to be sanitary and as much as possible of non-absorbent material, or so made as not to prevent frequent flushing and cleansing. 3. Communication by doors or other openings, with water closets, sleeping apartments, or other rooms liable to become a source of offense, should be strictly prohibited, nor should milk rooms be used for any other purpose whatever than the storage of milk. 4. Storage and cooling boxes should be substantially constructed, lined with metal, elevated well above the floors and away from surrounding walls, to permit thorough cleansing. They should be ventilated into the outer air and properly drained, but no drainage from them should directly communicate with the drainage or plumbing. 5. All plumbing should be strictly sanitary. 6. Rules, with specific detailed directions for periodical cleaning of milk house, storage boxes, cans, bottles, utensils and information regarding the care of milk and possible source of contamination, should be adopted and conspicuously posted in the milk room. 7. Cans should be only of such depth and such construction as to permit ready and perfect cleaning and it should be obligatory that they be cleaned before being returned to the dairy. 8. It should be obligatory that each and every can be tagged at its source, specific gravity as determined at the dairy, with the date and hour of of shipment. 9. Milk rooms should be permitted in cellars only under exceptional circumstances, and then should comply with every requirement of modern hygiene. 10. No milk-house or milk room should be under the same roof or in connection with any horse or cow stable, nor should it be connected with any unsanitary buildings or surroundings. 11. Construction, equipment, care and management should be such as to obviate the use of disinfectants, and their presence or use should be prohibited. Any odor or evidence of them about a milk

house should be construed as evidence of defective sanitation. 12. During the summer months no milk should be used when over twenty-four hours old, and during the winter the age of the milk should not exceed thirty-six hours. 13. Milk on the wagon should be thoroughly protected from the weather, and especially during the summer months, by being properly iced, and should be delivered within certain prescribed hours. 14. No milkman should deliver bottles containing milk, nor leave any receptacle of his own containing milk, at any house placarded as containing a contagious disease, nor should he receive any empty bottles or receptacles from such house, or be permitted under any circumstances to fill or refill any bottle while on the wagon.

A record of all cases of acute contagious diseases occurring upon the route or in the service of each milkman should be kept. Daily reference and scrutiny of the same should be made and upon suspicion of relationship of such contagious disease to any one source of the milk supply, or any one milk route, immediate investigation and action should follow.

The dealing in milk in small quantities by small shopkeepers, such as grocers, confectioners, and others should be abolished.

Curiosities of Filtration.

The Scientific American of May 7, says: In Sir E. Frankland's annual report on metropolitan water just published by the Local Goverment board some very curious details may be found in regard to the results of the filtration to which London water is subjected, all of which tend to support the statements recently made by the London Hospital as to the extreme variability of the filtered product. Take, for example, the West Middlesex, which month after month supplies its customers with water of a high degree of purity, containing on occasion only four microbes per cubic centimeter and on another appearing to be absolutely sterile. Of what advantage, however, is this if, on another occasion, the number mounts up to 120, and on still another to 576 microbes per cubic centimeter? Something happened in the month of June to nearly all the filters.

"Of the five companies drawing from the Thames, all except the Southward were smitten with this microbial epidemic in June, and even the Southwark had got in on the 2d of the following month. Of the two companies drawn from the Lee, the New River alone escaped." So serious was the condition that, from the tables to show the reduction of micro-organisms by filtration alone, we find that in one case 66.3 per cent. of the microbes passed the filters.

Lest, however, we should be tempted to cast ourselves upon Providence in these matters, and think that this "microbial epidemic" was some widespread fatality that no company could escape from, it is worth while to look further into the matter, when we find that where separate filter-beds were separately examined, as we have maintained ought always to be done, a very great difference was demonstrated in their activity. While one of the grand Junction filters was passing sixteen and another fifty-six microbes per cubic centimeter, another was passing 1,080! What this has to do with the construction of the filters and what can be done to improve them is another matter; but Sir F. Frankland seems to be on the right track when he draws attention to "the enormous advantage of fine sand in securing efficient filtration." Some companies go to the trouble of using much finer sand than others with apparently good results. "Thus: 1.8 feet of the fine sand of the New River Company and 2.65 feet of that of the West Middlesex Company are respectively more than twice as efficient as 4 feet of the coarser material used by the Chelsea Comyany,"

Contributions to the Study of Tuberculosis of the Testicle.

Dr. Koenig in one of his recent papers, an abstract of which appears in the American Medico-Surgical Bulletin, sums up the etiology of this disease in the following conclusions:

1. The prostate plays a very important role in the etiology of tuberculosis of the testicle. It serves as a breeding ground for the tubercle bacilli, where, for a considerable length of time, they can multiply though remaining almost inactive and causing only very slight disturbances. But under proper conditions these bacilli may with or without participation of the urinary organs, proceed along the vas deferens and infect the testicle. 2. Tuberculosis of the genitalia may occur through metastatic infection from almost any portion of the body, e. g., lungs and bones. Perhaps here the prostate plays the part of an intermediary station. 3. In a few isolated cases the infection of the testicle may occur directly from the bladder without any recognizable changes in the prostate having taken place. 4. Primary tuberculosis of the testicle, i. e., without the existence of the disease in any other organ, is very rare. The infection even in these cases probably comes from an unrecognized area of disease in the prostate.

As etiological factors trauma plays the most important role. Both gonorrhea and frequent local congestion have been quoted as causative elements. The disease occurs most frequently between the ages of 20 and 30. Almost all authors are united in believing that the epididymis is affected before the testicle proper.

Dr. Koenig sums up the treatment with the following conclusions:

1. Operative treatment is indicated in all cases of tuberculosis of the testicle, in which the urinary organs are free from disease and when the general condition is such as to allow of operative interference. 2. Even if in certain cases resection of the epididymis gives good results, castration will always afford better chances of recovery, because neither by clinical examination nor by direct inspection is it possible to prove the non-existence of disease of the testicle proper. 3. Involvement of the prostrate does not contraindicate castration. 4. Even when the tubercular process has extended to the urinary organs castration may be looked upon as a palliative measure. 5. The removal of the tubercular testicle exercises a beneficial influence both on the tuberculosis of the prostate and urinary organs, and also on the general condition of the patient.

Eczema: Its Successful Treatment.

J. D. Albright, M. D., (Medical Summary).

The practice of medicine is not now, and from the very nature of the human mind never will become, an exact science. This characteristic it possesses in common with all the sciences and arts that have for their object the welfare and happiness of the living creatures upon the earth. The fundamental principles of nature are fixed and certain; those of the sciences likewise to a certain extent, but their development is apparently unlimited, unless it be so by the exhaustion of the ingenuity or the extinction of genius from the human race. Improvement on every side is unquestionably the order of the age in which we live. Man in his advanced state of civilization demands that the talent of the world be at his feet if it tends to make his wealth more abundant, his health more perfect, or his happiness more complete. Medical men are frequently asked to explain why the advances in the domain of surgery have been so much more pronounced within later years than those in that of practical medicine, not knowing that it is but the untrained eye, the unreasoning or ignorant class of persons who first give rise to such assertions; for the fact is, that the most pronounced and the most unhoped-for remedies for the cure of disease have been brought forth within the last decade, did the public but know it.

Physicians have but rarely achieved great success by their perfection of medicinal or chemical preparations, nor is it their province to labor in that direction. Their work lies in the direction of diagnosis, advice and administration. The most prominent factor in the advancement and the discovery and perfection of medicine is undoubtedly the chemist. He is continually seeking new remedies that will be adapted to the more rapid and certain alleviation of pain, and the elimination of disease and disease products from the human system.

To-day the medical profession is not bound down by any set or fixed rules of treatment, but all schools are one in that the honest and worthy unite in doing the greatest good to the greatest number, and in the shortest possible space of time. Every physician has noticed that it is not always the patient who has recovered from some grave malady that is the most grateful, but very often much of the reputation and prestige enjoyed by many is directly traceable to one or more patients cured of some so-called minor rrouble. Among such cases none are more prominent, and at the same time more troublesome, than are ordinary cases of that common disease, eczema; and with the thought in mind of outlining a treatment which has proved itself to me to be efficient, I beg to submit a few reports of cases of this class:

Case 1. Mrs. Z., aged 58, consulted me after having tried six physicians in regard to eczema from which she was suffering. The disease involved her thighs, abdomen and chest. It had existed ever since the birth of her last child, nineteen years ago, and the torture attending it was, at times, almost unbearable. There was a severe itching, the parts were extremely tender, and the exudate from it was sufficient to saturate three thicknesses of ordinary clothing, and during the summer months she was compelled to insert pads made for the purpose to retain a presentable appearance. There was no indication of hereditary or acquired taint of the blood, and in fact no indication for external medication of any kind, so I placed her on a diet restricted to such food as was free from acids and an excess of condiment, and gave her a two-ounce box of unguentine, which had been sent me as a sample, directing her to apply it every night before retiring by spreading it directly over the surface and protecting it as well as possible with a

muslin cloth. The following night she was to cleanse the parts thoroughly and repeat the process. One week elapsed and she returned to me for another supply, stating that the case was much improved. I had no more of this preparation on hand, but at once procured a pound of it, again giving her the same size container. After using it as directed four weeks all traces of the disease had vanished, and to my great surprise left the skin without the remnant of a blemish. Frequent contact with this lady puts me in a condition to know that the former condition has not returned.

Case 2. Mr. H., nephew of the former patient, had for several years noticed an irritated spot on his temple, which now appeared to enlarge and become more troublesome. Fearing that in the course of time it might involve the eye he applied to me for treatment. A small box of unguentine was given him, with the usual directions, and a cure resulted before the entire box was consumed.

Case 3. Miss B. G., aged about 17, by occupation a waitress, came to me, saying she had lost her position because guests had objected to her waiting upon them on account of a skin disease involving her ears, neck and portion of the scalp. Examination proved it to be ordinary eczema, and I promised her a speedy cure. She was somewhat anæmic also, and I gave her as follows: For the eczema, unguentine, one ounce, applied to all the diseased surface; and internally a pill composed of iron, quinine, acid arsenious and strychnine. I did not see the case after that time until some months later, while traveling on the street cars, I noticed her sitting on the seat before me. I saw that the disease had disappeared, and that she was apparently in better health than when she had called on me. On inquiry I learned that the eczema had promptly disappeared by the use of the ointment that I gave her, and also that she had regained her former position and was happy.

Case 4. Mr. G. W., aged 34, occupation a cigar maker, suffered for several years with scrotal eczema, which had also involved the anus and thighs. His occupation necessitated his being seated nearly all day. During warm weather he perspired a great deal at those parts, which made life almost unendurable. He said he had tried everything, but never could get more than temporary relief. Unguentine was given him, with directions to apply it at night as in the other. The following week he called for more of it, stating that the first application seemed to relieve the itching and make him more comfortable. After using it for about fourteen nights he discontined it, and a few days ago I was told by him that the late "hot wave" had not brought about a return of the trouble.

The uses of this remedy are so varied and the results so satisfactory, that I will briefly note a few cases of different aspect.

Case 5. Was hurriedly called to a neighbor's house to atend a child, Leah B., who had accidentally overturned a vessel of boiling water from the stove over her arms and chest. The superficial skin was destroyed, while the deeper structures gave evidence of being badly injured. I hurriedly applied lime water and linseed oil, enveloped the parts in cotton, and to render her insensible to pain gave her an anodyne. I returned home and thought of unguentine, and to satisfy my mind, at once returned, removed the dressings that I had put on, and applied the latter preparation to the entire surface of the burn, and replaced the cotton. In a few hours the child rested peacefully. I did not see her until the following day. Then the dressings were removed, the parts cleansed and again dressed as formerly. Four dressings were all that were needed. The parts healed nicely, and verily without a scar.

Case 6. Mr. H., aged 52, occupation a driver, had his foot injured in a runaway, which caused erysipelatous and deep-seated inflammation. Pains had begun shooting up the leg, red lines of inflammation were fast appearing, and my patient was greatly worried. Previous to this he had not been attended by any physictan, but relied on home remedies. I ordered him to bed and literally bathed his foot in unguentine and applied cotton dressings. In a few days he was about again, entirely convinced that I saved him from an agonizing death by lock-jaw.

Mosquitoes and Malaria.

The Medical Record, July 30, 1898, comments editorially regarding Koch's ideas of the relation of the mosquitoes to malaria:

The theory that certain diseases may be conveyed by means of insects is not a new one. Linnæus was among the first to make the suggestion, although his views in this respect gained no foothold. Dr. Drake and Sir Henry Holland also drew attention to its probability. Latterly many investigators have endeavored to show that the mosquito is indirectly instrumental in the production of many diseases, and especially in that of malaria. Dr. Charles Finlay, of Havana, in 1881, submitted some papers to L'Académie Royalt des Sciences Médicales in Belgium, tending to prove that the mosquito, under certain conditions may act as

the transmitter of yellow fever, and he has repeateely since that time written in support of this belief.

Quite recently Dr. Patrick Manson, who for many years has held the belief that the mosquito may "act as the intermediary host of *filaria sanguinis hominis*," has stated his opinion that the mosquito plays the part of the extracorporeal host of the plasmodium malariæ. Koch, who has just returned from East Africa, where he has been studying the clinical and etiological aspects of malaria under peculiarly favorable circumstances, is in agreement with these views. He bases this agreement on the ground that mosquitoes are always prevalent wherever malaria prevails, and he mentions one locality in which, mosquitoes being absent, there is no malaria, although the conditions are otherwise favorabls to its production. Bignami last year published a paper in which almost identical conclusions were drawn. Referring to the observation of Smith and Kilborne, he drew attention to an example of the disease of the blood due to an intracorpuscular parasite and inoculated into cattle by a suctorial insect, and went on to say: "Malaria behaves itself with regard to man as if the malarial germs were inoculated by mosquitoes." As long ago as 1893 Marchiafava repeatedly asserted in private his belief in this mode of transmission of malaria, but he did not publish this view, as what he regarded as a positive demonstration was wanting. Now, however, the contention that the malarial poison is disseminated by the mosquito is supported by facts which are practically as convincing as those which can be adduced in favor of any other theory as to its cause. The question as to how the fever is contracted is a most important one, for once it is solved the way will be paved for a rational prophylaxis of malaria.

Transmission of Infectious Diseases by the Atmosphere.

E. Germano, in one of his recent paper on this subject, gives the results of his rearches on the resistance of bacteria to desiccation, and consequently on the possibility of their transportation in a virulent condition or the reverse by the atmosphere. After having explained the behavior in the presence of desiccation of the vibrio or cholera, the bacillus of plague, and the bacillus of cerebro-spinal meningitis, the author summarizes the results of all his observations in the following manner:

From the standpoint of resistance to desiccation pathogenic bacteria may be divided into three groups:

1. The first group comprises the vibrio of cholera, the bacillus of plague and the bacillus of typhoid fever. These belong to the category of fixed viruses, for they offer a feeble resistance to desiccation in dust, in which they disappear almost completely after twenty-four hours. Their transportation by the atmosphere in a virulent condition is no longer admissible. Everything seems to favor the opinion that the bacillus of influenza and the gonococcus behave in the same manner.

2. The second group comprises the streptococcus, the bacillus of diphtheria and the pneumococcus. They offer greater resistance to desiccation, and this resistance varies with the origin of the culture. Generally, however, we may consider them as fixed viruses, in the sense that their transportation by the atmosphere in a virulent condition does not ordinarily take place. However, under certain conditions, they may act like a volatile virus, that is to say, they may be transported by the air in a virulent condition, a circumstance which would explain the appearance of sporadic cases of erysipelas or diphtheria. Perhaps, also, in certain forms of epidemic pneumonia the pneumococcus becomes a volatile virus.

3. The third group comprises the intracellular diplococcus, the agent of epidemic cerebro-spinal meningitis, which offers a strong resistance to desiccation, and beside which, from the point of view of this resistance, may be placed the tuberculosis and the staphylococcus. The question of the conditions under which infection by the staphylococcus and tuberculosis may be transmitted by the air is not yet solved. However, if the infection of wounds occurs by immediate contact, one can understand how staphylococci, dried but still virulent, may be transported by the air and fall on a wound or objects in contact with it. With regard to tubercular infection, it had already been concluded from negative experiments on animals. that aerial infection in man is impossible. According to Germano this conclusion is not quite exact, for it is possible that in man, or, at least, in certain individuals, the respiratory passages are more accessible to tuberculosis than the respiratory passages of animals.

Death of Professor William Pepper, M. D., LL.D.

Willian Pepper, M. D., LL.D., Professor of Theory and Practice of Medicine and of Clinical Medicine, and late Provost of the University of Pennsylvania, died suddenly of angina pectoris during a visit to Pleasonton, California, on July 28, 1898.

Intestinal Auto-Intoxication.

The following is an editorial taken from the Medical News, July 13th, 1898:

Intestinal auto-intoxication is a surgical condition which has been for the most part relegated to the field of internal medicine, and oftentimes in the conduct of his operative cases the surgeon, having placed it in this category, dismisses all thought of it from his mind. The principle of intestinal intoxication is familiar enough, and is regularly referred to by the bacteriologist, the pathologist, and the lecturer in surgery in illustrating an intoxication. Yet the surgeon allows its application in surgery to end here, and thereby may fail to bring under this classification a certain recent laparotomy case that is doing badly, a case where the pulse is still up on the third day, the temperature has reached 100 deg. F., the abdomen is somewhat sensitive, the patient continues to vomit her food, and the bowels do not move. The post-mortem findings are slight, yet a reluctant diagnosis of peritonitis is made as a cause of death, and the surgeon is totally at a loss to know why his patient should have had peritonitis.

His patient is suffering from an intestinal auto-intoxication which passes over into a true sepsis, and the poison which overwhelms such a patient is not from without but from within the intestine itself. Secondary to a persistent reflex paralysis of the motor function of the intestine by shock and to an alteration in the intestinal function, there results both an increased production and a failure to eliminate toxic materials. Consequently the leucomains and the ptomain, or toxalbumin, products of the putrefactive bacteria are absorbed into the circulation and transported to distant parts to overwhelm the system and produce the constitutional symptoms that have already been mentioned.

The intestine is often the seat of such a disturbed metabolic process apart from any operative procedure. Excretory products poisonous to the system are regularly formed in the intestine, yet normal, regular action of the bowels carries this away as excrementitious material without damage to the system. Should the regular excretion of this material cease, as in constipation or in intestinal indigestion, it is absorbed and gives rise to the usual symptoms. In post-operative enterosepsis, however, the intestine has not been satisfactorily emptied and added to the mere retention of toxic materials regularly formed, there is a paralyzed function, with a consequent increase in fermentative and putrefactive decomposition, a lessened intestinal antisepsis, and an increased absorption. The intoxication soon passes over into a true sepsis, and the patient's history is short.

The condition is recognized by most surgeons as a grave one when it arises, but the reasoning as to its origin seems to be bad, and refuge is too often taken in the comprehensive diagnosis of peritonitis. When the condition is better understood more care will be given to the preparation of the gastro-intestinal tract previous to operation, and less reliance placed upon the single cathartic. It is surprising that a subject of such importance should have no space in the text-books on surgery, and should appear so seldom in periodic literature.

Cancer of the Tongue.

Dr. Butlin (British Medical Journal) reports a series of 102 cases of cancer of the tongue. He says it has not been his custom to remove the entire tongues as a routine operation in every case of cancer. In only one of his successful cases was the entire tongue removed. In the complete group of 102 cases the entire tongue was only removed 16 times, and an analysis of these 16 cases shows that four of the patients died of the operation, and two of these shortly after their return home, and that five suffered from recurrence *in situ*, and that only one case can have claimed to be cured.

The question of the removal of the entire tongue is one of considerable importance. The operation, to say the least, is dangerous, the patient is cruelly maimed, his speech is very defective; he has difficulty in taking solid food, he suffers from a collection of mucus and saliva in the mouth, and if his occupation depends on speech, even in a moderate degree, he is forced to abandon it. There is ample proof that a removal of a portion of the tongue is sufficient to cure a considerable percentage of patients, and to save a much larger percentage from recurrence of the disease within the mouth. In the removal of the tongue the author aims at removing the cancer with three-quarters of an inch of apparently healthy tissue around it in every direction. In many instances the lymphatic glands were found enlarged within a few weeks of the outbreak of the primary disease.

About 90 per cent. of the cases can be successfully treated by operation with but little fear of recurrence *in situ*, but of these ninety persons thirty will die of affections of the glands in the neck. In order to avoid this secondary recurrence the author advises the removal of the lymphatic glands of the neck at the time of operation, whether they be obviously enlarged or not.

A careful study of the cases shows that the lymphatics of the tongue are so disposed that they may pass through one or more of four groups of glands—(1) the submental group, (2) the submaxillary group, (3) the parotid group, (4) the carotid group.

With these groups of glands in mind the author, as a routine treatment, removes all the glands in the anterior triangle of the neck, including the submaxillary salivary gland. The dissection is commenced below and carried upwards, and the large vessels are exposed for a considerable distance. This dissection, the author states, requires from an hour to an hour and a quarter. As but few of these complete operations have been performed, the author as yet is unable to draw conclusions as to its ultimate value.

The Aseptic Influence of Cold.

One of our exchanges says that it is probable that microbes do not exist in polar regions and at great elevations. Most probably all of them are killed by intense cold. It is for this reason that frozen meat can be preserved fresh for an indefinite time. The fossil mammoths which have been discovered in the banks of Siberian rivers, embedded in ice, are often quite undecomposed and their flesh is eaten by dogs. Professor Tyndall experimented on the vitality of microbes by exposing solutions of sugar to the air on the higher summets of the Alps, where he found that fermentation did not take place, whereas at lower levels, where the temperature was higher, the liquids quickly became turbid, owing to the presence of microbes. Dr. Nansen furnishes a comfirmation of the truth of the above statements. He informed the writer that as soon as his companions returned to Norway after their sojurn in the extreme north they all caugth cold, but had been entirely free from this ailment during their prolonged absence. The inference is that reproduction of the catarrah microbe had been prevented in the cold of the polar region. That cold, while repressing activity, does not always kill pathogenic micro-organisms we know, since virulent typhoid bacilli have repeatedly been found in ice.

Dr. Grandy is Made Surgeon.

Dr. Luther B. Grandy, a most prominent and popular physician of Atlanta, was recently appointed by Governor Atkinson surgeon of the Third Regiment, Georgia Volunteers. Dr. Grandy will rank as major and will have under him two assistants, each of whom will hold the rank of captain. —*Atlanta Constitution.*

Are There Germs in the Normal Puerperal Uterus?

Burckhardt having noticed how ofter in a normal convalescence from labor the cervix was still open on the tenth or twelfth day, and that there was also at this time a yellowish-brown discharge mixed with bits of tissue, made a series of examinations to determine the bacterial condition of the puerperal organ. (Medical News, Aug. 13, 1898.) He found that the cervix was always open enough to admit the finger as late as the twelfth day, and thaa if it appeared not to be so, the constriction was apparent, not real, and disappeared if the body of the uterus was lifted up straight. The inner surface of the uterus he found smooth. It felt like a granulating wound, while the placental attachment was easily made out by its greater roughness. Examinations of the fluid taken from the upper portion of the uterine cavity showed it to contain germs in thirteen out of fourteen cases. These were all patients who were making a good recovery from labor, without fever or other abnormal symptom. "The puerperal uterus," says this writer in conclusion, "must be looked upon as an open wound. In the first days after labor it is free from germs, but little by little they spread over its surface as they do over that of every other open wound, the cervix offering little resistance to their progress. An internal os which readily admits the finger can hardly be said to oppose the passage of a microbe. But at this period the condition of the inner surface of the uterus is such that no evil follows this microbial growth except under adverse circumstances, such as the retention of secretion."

Oysters and Typhoid Fever.

If subsequent observations should confirm those detailed by MM. Sabatier, Ducamp and Petit the Gallic oyster, at least, must be acquitted of the imputation cast on its species of late, and the part of the popular mollusc as a distributor of the micro-organism of typhoid will be open to doubt. (Quarterly Medical Journal July, 1898.)

The author examined bacteriologically oysters from the beds of Cette and Marennes, and in no instance could they discover the typhoid bacillus, or the bacillus coli. Even in the bivalves taken from water contaminated with sewage they found only saprophytic varieties. They proceeded next to place within the shell of the living oyster, cultures both of the typhoid bacillus, and of the bacillus coli. The oysters were afterwards placed in conditions exactly analogous to those obtained in oyster-beds. Notwith-

standing the direct experimental infection, search after the fourth day revealed no trace of either organism. Either the water was unfavourable to their growth, or else the oysters themselves possess a vital means of immunity which is fatal to the organisms. Finally, although the alimentary consumption of oysters at Cette is beyond that of other places, the average number of cases of typhoid is not greater than in other towns.

Eye Strain.

Dr. Cheney has seen many cases with vertigo as a result of eye strain without other symptoms of asthenopia. It is frequent during middle life and is often regarded by the patient as a forerunner of apoplexy. Often the attack is of very mild character, causing the patient but momentary discomfort; while in other cases it lasts for a number of minutes and is of sufficient severity to necessitate sitting or lying down. A mild feeling of dizziness, frequently accompanied by slight nausea, lasting for hours is another form of the trouble, but this is usually associated with prolonged use of the eyes, and its origin is correctly ascribed by the patient.

Drowsiness is not often recognised as a result of eye strain, but it is quite common, and is often unassociated with other eye symptoms. Several cases of this class are reported.

Antidiphtheritic Serum and Diphtheria Albuminuria.

Dr. C. H. Spronck (Louisville Medical Monthly, June, 1898) offers the following conclusions from his experimental study of the action of antidiphtheritic serum upon a pre-existing diphtheria albuminuria:

1. A subcutaneous injection of ten c. c. of antidiphtheritic serum, or the serum of a non-immunized horse produces in a healthy rabbit of from two to three kilos, a very slight albuminuria, which persists for twenty-four hours only, and results simply in the passage of a small quantity of serum albumin through the renal filters. 2. The amount of this albumin is greater, and it persists longer following a diphtheritic albuminuria in the rabbit; also, if the rabbit has just recovered from a simple albuminuria. 3. The antidiphtheritic serum exercises no unfavorable action on such albuminuria, even when injected in large doses. 4. On the contrary, this serum exercises a favorable action if it is injected from the start of a diphtheritic albuminuria, or during thirty-six to forty-eight hours after the onset of such a complication. 5. Finally the antidiphtheritic serum is incapable of promptly arresting a complicating albuminuria, yet it can materially modify its course for the better and diminish the intensity and duration of the process.

The Open-Air Treatment of Infectious Diseases in Children.

Mons. Contal, following a suggestion of Prof. Hutinel, who symptomatically applies open-air treatment to infectious diseases in children, gives the results of this treatment in his *these*. (Treatment, July 14, 1898.)

Open-air treatment is indicated in the following diseases: congential syphilis, atrophy, whooping cough, protracted measles, broncho-pneumonia, chronic gastro-enteritis, and rickets.

The children were during the warm season (May to September) removed in their cots into the garden, and remained there, protected against direct sunlight and radiating heat, from six a.m. to six p.m. When the weather was bad the children were "housed" in tents or sheds.

The treatment invariably resulted in an increase of appetite and of weight and a decrease of the fever. To give only two examples:—A child, about two years old, very cachectic and anæmic, suffered within three months from broncho-pneumonia, whooping cough, and measles successively. The child was permanently cured by the open-air treatment. In another child, who suffered from post-morbillar broncho-pneumonia, the temperature remained permanently high, and on the twenty-fourth day was still at 102 deg. F. in the evening. It was dicided to subject the child to open-air treatment. Two days after the treatment had begun the temperature fell to 98.4, deg. and remained permanently so.

Ammonium Chloride in Dysentery.

Dr. John W. S Attygalls, (New York Medical Journal) speaks highly from experience of drachm-doses of ammonium chloride given every four hours, in dysentery, milk-and-arrowroot diet being ordered. He has been suprised, in the majority of cases, at the rapid disappearance of blood from the stools, generally on the thirt or forth day, and at the freedom from abdominal pain. In two cases only had he to resort to other treatment, which consisted of small doses of the extracts of opium and cannabis Indica dissolved in about a wine-glass of honey and mixed with about a quarter of a fresh baél fruit, which is eaten at the time.

Purulent Pleurisy with Gaseous Distension of the Pleura.

At a meeting of the Academy of Medicine M. Lemaitre reported the case of a woman, 21 years of age, who, after confinement, suffered from a left-sided pleurisy. (Medical Bulletin, July, 1898.) The general condition becoming worse, it was decided to operate for empyema. The operation gave exit to 4 litres (7 pints) of very fœtid pus. Notwithstanding that before intervention it was perceived that the apex-beat was to the right, there was observed, in the front of the chest as far as the fifth rib and to the left axillary region, a tympanitic and sonorous sound. It had also been thought that there was but a small quantity of liquid in the pleural cavity. M. Lemaitre attributed the resonance so abnormally sonorous to distension of the stomach and colon. He based his opinion upon the following experiment. If a vessel full of water is placed in a box so as to completely occupy it and the box is then set upon a membrane capable of vibrating, such as a tambourine, a marked sonorous sound is obtained when the box is percussed. This is the explanation of what is found in cases of pleurisy similar to that which he described. In two other cases M. Lemaitre had observed the same peculiarities.

The Value of Water in the Treatment of Gastro-Intestinal Disorders.

John A. Lichty, M. D., (Medical News), treats this subject, in part, as follows:

"The famous Hoffman, a contemporary of Boerhaave, in writing upon the subject of water, said: 'If there exists anything in the world that can be called a panacea, a universal remedy, it is pure water; first, because it will disagree with no one; secondly, because it is the best preservative against disease; thirdly, because it cures agues and chronic complaints; fourthly, because it responds to all indications.'

"But water is not a panacea, and those who have not kept this in mind when speaking of its efficacy in the treatment of disease are in the main responsible for the general disfavor into which hydrotherapy has so often fallen. Therefore, in writing upon the subject of water in the treatment of gastro-intestinal disorders, I approach it with care and candor, very ready to admit that it is not a cure-all, and to recognize the many other valuable remedies which are usually employed in the treatment of such affections, but with a growing consciousness that water is not as generally employed as it should be, and when employed, it is often in the most careless and haphazard way.

"Pure water, when applied to an irritated mucous membrane, has a very soothing and quieting effect; in fact, it affects all tissues in this way. When an injury is sustained, usually the first impulse is to bathe the injured surface with water. It was this instinct which first led to the recognition of the therapeutic value of water.

"The following facts, referring to the elimination of water, I base upon experiments upon myself and observations upon patients: When pure water is taken in large quantities (ten or twelve tumblerfuls, or eighty ounces a day), it produces a decided and constant effect upon the activity of the eliminating organs of the body. During the first few days the kidneys become very active, a large amount of urine is passed, which is pale and of low specific gravity, and the relation between urea and uric acid is very much disturbed, considering their usual relation to be one part uric acid to thirty-three of urea (Haig); during this disturbance I frequently find the proportion to be one to fifty-five, the uric acid being diminished about one-half, and the urea only slightly lessened. If the ingestion of this amount of water is continued a week or two, the excessive activity of the kidneys seems to diminish, the amount of urine passed in twenty-four hours is perhaps sixty instead of eighty ounces; it has a specific gravity of 1012, instead of 1006 or 1008; the uric acid remains diminished, while the urea is much increased, the proportion being, perhaps, one to seventy. For the first few days the specific gravity of the blood, if in the beginning it is above normal, remains the same, but it soon gradually diminishes to the normal. As the amount of urine lessens, the feces seem to be more moist, and the bowels, if constipated, are inclined to become regular.

"In the treatment of diseases of the gastro-intestinal tract, I have learned that water must be employed according to the condition which is found, and that as much care must be exercised in prescribing it as in advising the employment of any other remedy. In acute gastritis small pieces of cracked ice are often all the stomach will endure. As the irritation subsides, frequently repeated drafts of water are tolerated, and finally liquid foods.

"In hyperchlorhydric there is frequently a disturbance of the motor action of the stomach. A large quantity of water taken at any one time will usually aggravate this condition, and yet water is very necessary in these cases, as it keeps the highly acid contents of the stomach diluted and thus

less irritating to the gastric mucous membrane. Under these circumstances it is best to prescribe it in small quantities, frequently repeated.

"There is no condition of the bowels which yields more happily to the use of water than chronic constipation. The causes of constipation are numerous, and no treatment will permanently succeed which does not meet the cause. I have no doubt that in many instances the only cause of constipation lies in the ingestion of an insufficient quantity of water, and that in many more cases, whatever other cause may be found, it is secondary to, and induced by, a lack of water in the system.

"Water is a valuable aid in the treatment of the various forms of diarrhœa and dysentery.

"In dysentery nothing can be used which will give more general satisfaction than enemas of plain cold water. They are grateful to the patient, do not produce nausea, and very largely relieve the tenesmus from the first. A noted physician has said of this treatment: 'It changes a huge internal into an external abscess, and enables us to cleanse the bowels of their putrid contents.'"

Cupric Electrolysis in Laryngeal Tuberculosis.

The Medical Record, Vol. 51, No. 22, quotes Dr. Scheppegrell as saying that the surgical treatment ot laryngeal tuberculosis —by curettement and subsequent application of lactic acid—is unsatisfactory, as it is painful, the hemorrhage is sometimes quite severe, and edema occasionally follows. Galvano-cautery, though free from these disadvantages, requires such great manipulative skill, that some of the most prominent laryngologists have advised against its use. It has been the doctor's desire to find a method which would be conservative, not especially difficult to carry out, and if possible, applicable in all cases of that grave disease; also one that should not be painful, followed by little or no reaction, devoid of hemorrhage and should not expose the parts to reinfection from the tuberculous expectorations. Cupric interstitial cataphoresis he believes to be such a method.

He uses spherical electrodes of pure copper, one-eighth to one-fourth inch in diameter, attached to an insulated handle. These bulbs connected with the positive pole, are applied directly to the tissues and a current of two to five milliamperes used for 3 to 10 minutes, the seance being repeated every two or three days. A dispersing electrode connected with the negative pole is applied to the back of the neck. The copper in contact with the tissues is electrolyzed and the copper oxychloride produced passes directly into the tissues. It possesses marked germicidal properties and stimulates the tissues to a healthy reaction.

The author has found the following advantages from the application of cupric electrolysis:

1. There is no real destruction of the tissues, and no laceration of the surfaces which might form a point of entrance for new pathogenic germs for reinfection. The cure is effected by the reaction of the tissues in the same manner that we often see specific lesions heal when the system is under the influence of mercurials. 2. In the cases which he has treated with this method there has been absolutely no reaction or hemorrhage following the application—a point of great importance with tubercular patients. 3. This method does not demand the high degree of manipulative skill required for curettement and the electro-cautery in the larynx, and is especially simple when direct laryngoscopy can be used. 4. This method is applicable to all cases of laryngeal tuberculosis.

Hypnotism in Pregnancy and Labor.

On June 20th, 1898, at a meeting of the New York County Medical Association, Dr. Louis Lichtschein read a paper with this title (Medical Record). He said that there were only three normal conditions in pregnancy in which suggestive therapeutics was useful, viz.: (1) In pernicious vomiting; (2) anorexia; and (3) abnormal cravings for particular foods, and especially for unpalatable substances not usually regarded as food. That the obstinate vomiting of pregnancy was sometimes amenable to psychical influences was shown by its amelioration or cessation by the mere change of surroundings. He had not had the opportunity to use hypnotism in complicated cases of labor, but when it could be used successfully it possessed a decided advantage over chloroform. Some pregnant women could not be hypnotized at all; others could be made to sleep only superficially; while others again slept deeply, but awoke as soon as the pain became severe. Still others slept very deeply and did not awaken during the pains, and on awakening afterward had no recollection of what had taken place. There was still another class, in which, although the patient was awake, she felt no pain as the labor progressed. Of forty-six cases of labor in which he had employed hypnotism, nine were failures; in eleven the patients slept superficially,

fifteen slept deeply, ten had a very deep sleep with perfect amnesia, and one remained awake but felt no pain at all. A number of illustrative cases were narrated, including one in which it was asserted that the "suggestion" given two months previously had resulted in an unexpected and painless delivery before he could reach the bedside. During the deep hypnotic sleep the pain could not only be reduced, but it could be intensified, and the need for chloroform and forceps in some instances dispensed with. The conditions of the puerperium which might be favorably affected by suggestion were after-pains, lactation, peristaltic movements of the bowel, puerperal paralysis, and puerperal mania. An excessive flow of milk could often be promptly checked by suggestion.

Treatment of Tuberculous Disease of the Bladder.

C. Mansell Moullin at a meeting of the London Medical Society May 9, 1898, stated that constitutional treatment ought in every instance to have a thorough trial before recourse was had to any other measure. (British Medical Journal.) Drainage was at best only a palliative; sometimes, indeed, it only made matters worse, the track of the drainage tube becoming infected in its turn. The only procedure that in suitable cases held out some hope of cure, or at any rate of considerable relief, was suprapubic cystotomy, which gave access to the disease. Against this operation had been urged its danger; that even after it had been done the removal of the tuberculous material was almost impossible; and, lastly, that as the growth in the bladder was most often secondary to the disease elsewhere, the effect of the operation must be practically *nil*. Taking these points *seriatim*, he observed that, if properly performed, suprapubic cystotomy was virtually unattended by risk. The removal of the tuberculous disease might indeed present considerable difficulty in certain cases, especially in those in which the diagnosis had been made too late. He insisted on the necessity of arriving at a diagnosis much earlier than was usually done. The disease was one which manifested itself from the very beginning by irritability of the bladder and hæmaturia. The cystoscope enabled one to detect ulceration of the bladder at once, and the detection of the bacillus, even when present in small numbers, was rendered easy by the centrifugal machine. It was a very different disease when diagnosed as it ought to be from what it was as usually diagnosed; in fact, this tended to prove that if the disease had been allowed to progress beyond a certain stage it was not easy to deal with. He believed that the bladder was nearly always infected through the blood vessels and lymphatics, for when intact the epithelium was a sufficient protection against direct infection, so that it could spread from the kidney to the bladder without infecting the ureter. When this was the case the disease was usually situated on or near the orifice of the ureter. and when he found the ulcer in this situation he regardsd it as presumptive evidence of tuberculous pyelitis. The trigone was most frequently attacked in the other cases simply because it was physiologically the most important part of the organ. During the last few years, since, in fact, one had paid more attention to the subject, the proportion of cases of primary disease of the bladder had gone on increasing, and operations had been preformed with a fair measure of success. He himself had operated in three cases. The first, though still sometimes obliged to get up once in the night, was in good genleral health. The second was a boy who had remained well ever since, and the third was too recent to form an opinion about. He has come across two cases in the *post-mortem* room in which he felt sure that if the diagnosis had been made early enough the patients might have been spared terrible sufferiug, even if the fatal termination had not been thereby averted.

Paralysis of the Respiratory Centre in Cerebral Compression.

In a recent article in the Therapeutic Gazette the question of trephining with a view to relieving the respiratory difficulty in cases of intra-cranial lesions is discussed. The writer points out that in a large proportion of cases of apoplexy death takes place from pressure exerted directly on the respiratcry centres; and he further adds that there is evidence to support the view that, in other conditions resulting in great increase of the intracranial tension, the fatal termination is determined by interference with the same centre. Proof of this lies in the fact that in a variety of cases the heart has been found to continue beating long after voluntary breathing has ceased, and artificial respiration has prolonged life for considerable periods. Thus, in a case of meningeal hæmorrhage of Hutchinson's, the pulse continued five minutes after respiration ceased; in Fagge's case of cerebral abscess, for ten minutes; in another for twenty-five minutes. Horsley has had experience of four cases of cerebral tumour in which during the operation respiration

stopped while the heart continued to beat. When pressure was diminished by the opening of the skull the breathing was resumed. The same surgeon suggests that, in cases where apparent sudden death follows severe blows to the head, a fatal result might be obviated by having recourse to artifical respiration for a time. Macewen reports cases where breathing stopped during operations for cerebral abscess; in one of them the heart continued to beat for twenty-four hours after natural respiration had ceased. Jalland has had experience of a similar kind, as well as various other surgeons, including Firth, who recently kept up artificial respiration for six and a half hours, during which time the pulse continued to beat. The skull was trephined during this time, but without permanent benefit. Page has recently reported a case of profuse hæmorrhage from the lateral sinus accompanying a basal fracture, where artificial respiration, begun after the patient was to all appearance dead, enabled the surgeon to make a serious though unsuccessful attempt by trephining to remove the cause of the compression.

The Vomiting of Pregnancy.

Bacon in the April issue of the Journal of Medical Science defines vomitus gravidarum as "vomiting during pregnancy, due to a variety of immediate causes acting upon the abnormally irritable nerve system of the pregnant woman." These causes may be due: (1) to an abnormal condition of the vomiting center; (2) to sufficiently powerful impulses sent from genital tract causing an irritation of the vomiting center; (3) to a combination of influences affecting the vomiting center both directly and reflexly, as poison circulating in the blood or nutritive changes coexisting with peripheral irritation; (4) to a psychopathic factor like that which exists in the vomiting of hysteria.

While vomiting may commence at any time after the first week of pregnancy, seventy per cent. of all cases begin during the first month, very few developing during the fifth or sixth months. The greatest amount of sickness exists during the second month. Vomiting does not occur in first pregnancies, but in primiparæ the frequency of its appearance increases with age so that ninety per cent. of first cases over twenty-five years of age are more or less affected. Women who menstruate regularly and without pain and not too freely have less sickness than those who are troubled with profuse or painful menstruation.

In summing up his suggestions regarding treatment the writer says:

1. The abnormal irritability of the nervous system, including the vomiting center, is to be allayed by keeping the patient in the horizontal position, by attention to the skin and bowels and kidneys, using rectal and, if necessary, hypodermic injections of salt solution. 2. The hysterical condition which is so commonly found present should be controlled by strengthening the will and influencing the dominant idea of the patient. 3. All sources of peripheral irritation should be discovered and treated. 4. In extreme cases subcutaneous saline injections serve the threefold purpose of (*a*) dilating the blood and increasing vascular tention; (*b*) eliminating toxins through renal and intestinal emunctories; (*c*) furnishing two most important kinds of food. 5. Induction of abortion is never indicated. At a stage when it is safe and efficient it is not necessary, and in extreme cases it adds greatly to the danger, rarely stops the vomiting, and can be substituted by the artificial serum.

Pus in the Pelvis.

Dr. Joseph Taber Johnson (American Journal of Obstetrices and Diseases of Women,) in a paper with the above title, submits the following summary of advantages of vaginal over abdominal sections, especially for pus in the pelvis: 1. The vaginal section is very much more quickly done than the abdominal, and convalescence is much shorter. 2. There is little or no shock. 3. The peritoneal cavity being seldom opened in these cases, except when hysterectomy is done also, much less traumatism occurs to intestines, bladder, ureters, omentum, or abdominal wall, to greatly prolong difficult and dangerous operations. 4. Drainage being down-hill, is not opposed by the laws of gravity, and is more natural, safe and copious. 5. There is no ugly scar to annoy the eye and develop a painful keloid or permit a ventral hernia. 6. The mortality of the vaginal operation for pus is vastly less than in that of enucleation of tubo ovarian abscesses from above in the badly adherent and complicated cases. 7. Experience has abundantly proved in more than a sufficient number of cases that the removal of the abscessed organs is not necessary to a symptomatic cure, and that a permanent and complete restoration to health is the rule, while a secondary operation later on is the exception. 8. Should a secondary operation from the above become necessary, its performance would be much easier and safer, on account of the freedom from pus and the improved condition of the patient. 9. The perfection of the operation for draining double pus tubes through the

vagina has opened the way for many other beneficent operations from below, including anterior and posterior colpotomy, explorations, hysterectomy, etc. 10. Many patients who fear and will not consent to celiotomy with its possible accidents, including intestinal injuries. the post-operative sequelæ and the scar, the stitches, the bandages, the troublesome supporter for six to twelve months, and the possible hernia, will readily consent to vaginal incision and drainage, and vaginal hysterectomy when necessary. 11. Vaginal hysterectomy with the ovaries left in situ is followed by much less nervous and physical disturbance than when the ovaries are removed and the uterus left, or than when they are all removed at the same time. 12. If any or all of these advantages are admitted in favor of the vaginal operation over the abdominal, then it must follow that it is our conscientious duty, to operate by this route more frequently in the future than we have done in the past.

Absorption of Fat.

The investigation of Moore and Rockwood upon the absorption of fat in the intestine marks a fundamental advance in our knowledge of this subject. The theory that the fat was absorbed in the intestine, in the form of an emulsion of natural fat, was formerly the accepted theory upon this subject. In recent years this theory has been discarded by various observers for the following reasons (Boston Medical and Surgical Journal):

1. Careful observation has failed to reveal the passage of fat globules in the striate border of epithelial cells of the intestine where fat absorption is going on. 2. The formation of the fat globule shows a gradual advancement in size in absorption, arguing for a gradual formation from solution, not an absorption of globules from emulsion (Krehl and Altmann). 3. Investigations, as those of Cash and Ludwig, Radjiejeuski, Munk and others, have proven that fat absorption goes on perfectly when no emulsion of fats, but simply a clear solution is present in the intestine.

Following the abandonment of the theory of absorption by emulsion of neutral fats, Munk has suggested that the fat is absorbed in the form of fatty acids, and has supported this by investigations which prove that absorption of fatty acids may take place in the intestine.

Altmann, following this work of Munk, and also that of Radjiejeuski proving that soap may be absorbed from the intestine, suggested that the absorption of fat occurs as fatty acids and as soap. That this latter theory coincides with the actual facts of the case the investigation of Moore and Rockwood has determined. These authors not only confirm these qualitative determinations of the absorption of fat as fatty acids and soap, but also place the theory of the absorption of all the fat in the above forms on the basis of a quantitative determination. They show—

1. That the mixed fatty acids of the food fats, as mutton, beef, lard, are soluble in bile acids at the body temperature. 2. That the solubility of these fatty acids from the mixed fats of food in the bile of the ox, dog and sheep is sufficient to account for the solution of all the fatty acids from the fat of normal food. 3. That the result of the action of the mixed intestinal secretions of the bile and pancreas upon the fat of food is a splitting of the neutral fat to fatty acids and glycerine and a consequent formation of a solution of fatty acids in bile acids, *plus* soap from the combination of fatty acids with alkalies. 4. That in the intestinal contents of some of the animals used in the investigation the fat radicle was represented only in the form of fatty acids in solution, or in soap; and that absorption of fat occurred perfectly in these cases. In others an emulsion was present together with fatty acids and soap.

From the summary of results on this subject the authors conclude that the fats of food are all absorbed from the intestine in the form of fatty acids in solution, and of soaps. In the part of the intestine where the reaction is acid the absorption is principally of fatty acids; in the part where the reaction is alkaline to litmus, or soap.

The importance of this knowledge in connection with the treatment of conditions of absence of the pancreatic or biliary secretions from the intestine is evident.

The Aseptic Treatment of Recent Open Wounds.

At the recent German Surgical Congress, Friedrich discussed this subject (Edinburgh Medical Journal.) He said that views were still divided as to asepsis or antisepsis in the treatment of wounds. It was a mistake always to speak of a wound as infected, and the views brought about by the experiments of Schimmelbusch, as to rapidity of infection, were not altogether correct. It has been shown that infections of fresh open wounds remained local for some time. His own experiments has shown that, but they were made with bacteria in their natural state, and not in a state of pure cultivation as in Schimmelbusch's experiments. The two things were very different. In

his own experiments, the infection remained local for six hours. When the surface of the wound was freshened by removal of a superfical layer with the knife within six hours, all the animals recovered, whilst all the control animals died in which the freshening had been delayed eight hours. In Schimmelbusch's experiments, general infection had taken place within thirty minutes after inoculating with pure cultivations. The practical result of this investigation was that the wound should be freshened and accurately sutured. If patients came under treatment later, if the wounds were large, lacerated and crushed, so that the surface could no longer be freshened, other ways were to be followed. No means of disinfection were sufficient here. The best were sublimate 1 per 1000 iodoform and xeroform. If the wound surface were accessible, antiseptics had a delaying effect, but if sufficient material had already been absorbed, they failed, for we had no material that acted at a distance. Here other measures must be adopted; the wound must be kept open with dry, sterile dressings. In this way he had had excellent results, and colleagues who had adopted his measures were satisfied with them. He summed up as follows:

1. Infection of a recent wound is a local process, and remains so for five or six hours. 2. The best method of procedure is freshening the whole extent of surface. 3. When this is contraindicated, the open treatment is the best preventive of grave infection. 4. Disinfection has a favorable influence at first; it has no effect on infection actually in progress.

The Management of the Third Stage of Labor.

Dr. Byers discussed this subject at the Ulster Medical Society, April 7th, 1898, (British Medical Journal, April 16, 1898).

He considered the various theories put forward to account for the separation of the placenta—retroplacental hæmatoma, detrusion, and alteration in the relationship of the placental site and placental area—and pointed out that in settling this question they must be guided by clinical experience and the evidence afforded by sectional anatomy. Their knowledge of the anatomy of this stage was largely due to Dr. Barbour, whose conclusions had been confirmed by Pestalozza of Milan, Pinard and Varnier of Paris, and Stratz of Berlin. Professor Byers then considered the various methods of managing the third stage, discussing (*a*) the expectant method, (*b*) Crede's, and (*c*) the Dublin plan. There were two elements in the third stage—the separation of the placenta and its expulsion. It was best to allow Nature to accomplish the first act, and to wait until the upper, active, thick, contractile part of the uterus had expressed the placenta, and then at the height of a pain to express the placenta from the lower expansile uterine segment or vagina. He advised (*a*) the following down the birth of the child in the second stage; (*b*) the constant control of the uterus during the third stage; (*c*) the turning of the patient on her back; (*d*) the careful watching for the separation of the placenta, aided in certain cases by gentle massage of the uterus; (*e*) the expulsion of the placenta when it was clear it had separated, and (*f*) the continuous control of the uterus by the hand of the accoucheur until the binder was firmly applied.

Climate Versus Serum Treatment of Tuberculosis.

Dr. A. E. Waxham, of Denver, presented a paper with this title at the forty-ninth annual meeting of the American Medical Association. He said:

Because a patient has tuberculosis is no reason why he should be sent two thousand miles away from home, comfort, and friends, only to find perhaps his malady increased, and to die among strangers. We should prescribe climate with as much discretion and judgment as any other remedy. Whether a patient should be sent from home in search of health will depend upon several conditions. The stage of the disease, the vigor, vitality, and disposition of the patient, and the means with which to live comfortably, are all to be considered. Tuberculosis in the last stage is only aggravated, and the condition made worse by residence in this altitude. Climatic treatment should be applied early. In selecting cases for this treatment, select the early ones instead of waiting until the golden opportunity is lost in the hope of warding off the disease by less effective means. Financial factors must be considered. Many a case is aggravated as a result of anxiety and forced economy. If the patient's circumstances are such that he cannot live a year in idleness it is folly to send him here. A contented mind, abundant food, and cheerful surroundings are essential factors. Early cases of tuberculosis, with no heart lesions, are best adapted to the high altitudes, and the invigorating, stimulating atmosphere of Colorado. More advanced cases need a warmer climate, such as Arizona or New Mexico. Many cases do well in Colorado in the summer and fall, but do not bear cold weather. Many do well in

Arizona in winter who cannot endure the heat of the summer. The success of climatic treatment will depend on the proper selection of the climate, and the proper selection of the cases as well. The effects of tuberculin in tuberculosis are disappointing. Altitude, pure air, sunshine, uniformity of climate are essential factors in treating tuberculosis because these conditions invigorate the system and stimulate the production of the normal antitoxins of the body.

The Mississippi Valley Medical Association.

The twenty-fourth annual meeting of the Mississippi Valley Medical Association will be held at Nashville, Tenn., October 11-14, under the Presidency of Dr. John Young Brown, of St. Louis, Mo.

This association is second in size only to the American Medical Associrtion and has done most excellent scientific work in the past. The annual address will be made by Dr. Jas. T. Whittaker, of Cincinnati, on Medicine and by Dr. Geo. Ben Johnson of Richmond, Va., on Surgery, The mere mention of the names of these gentlemen establishes the fact that the association will hear two scholarly and scientific addresses.

Nashville is a most excellent convention city and is well equipped with hotels, and with the record of the meeting in Louisville in 1897, as an example, the local profession under the leadership of Dr. Duncan Eve as Chairman of the Committee of Arrangements has prepared to have a better meeting.

Already titles of papers are being received. These should be sent to the Secretary, Dr. Henry E. Tuley, No. 111 West Kentucky Street, Louisville, Ky., as early as possible to insue a good place upon the program. Reduced rates on all railroads will be granted on the certificate plan.

Fruits in Fevers.

The Dietitic and Hygienic Gazette in commenting upon this subject says:

Fruits, especially in the form of fruit juices, are a most convenient and certainly the most appropriate of all foods. It is now almost universally recognized that beef tea and meat preparations of all sorts should be wholly proscribed in cases of fever, as the patient is already suffering from the accumulation of waste matter to such a degree that the addition of even the small amount contained in beef tea or a small piece of meat may be sufficient to give rise to an exacerbation of the disease and lessen the patient's chances of recovery.

German physicians make great use of preparations of fruit in fevers, particularly of fruit soup, which is made by boiling for some time one part of dried fruit of some sort with four or five parts water. In cases in which considerable gastro-intestinal irritation exists, the soup or decoction thus prepared should be carefully strained, so as thoroughly to remove the skins and all other extraneous matters. The juice of oranges, grapes, raspberries, blackberries, huckleberries, tamarinds, currants, or cranberries may be added to water as a beverage in fevers. Thus used, they do not only increase the quantity of water, which the patient is enabled to drink, by giving to it a distinct and agreeable flavor, but also aid the elimination of poisons with which the system is struggling, by a slight diuretic action. Fruit juices used in the same way are likewise highly beneficial in Bright's disease and other forms of kidney disease in which it is desirable to increase and maintain the flow of urine. The grape fruit, the lime, the shaddock, and the pomegranate also afford agreeable acid juices which may be used in the same manner. The antiseptic value of fruit juices must also be recognized as a positive benefit in these cases.

Some Psychological Symptoms in Inebriety.

The Journal of Inebriety in its July issue discusses this subject editorially. We abstract the following:

Irrespective of all concealment there is a certain ill-definable change in the mind and conduct of inebriates which cannot be mistaken. In some cases it is extreme sensitiveness to the surroundings, reflecting every state of mental contagion and contact, either elated or depressed with every influence about them. In other cases they are indifferent and irresponsive to the present, even up to the point of repulsion, which is not always clear or well defined. A reserve and silence, with a prolonged, indifferent stare is marked in some cases. In some an extreme congeniality and responsiveness, in others a lack of this, with a certain coarseness and mental distance from you and the subject.

Along with this is often a certain exaltation and self confidence of power and capacity which is unusual. He seems to develop a new self-reliant personality in regard to himself, particularly when under the influence of spirits. A certain positiveness and assertiveness of manner appear, which suggest delusion, and grow with the progress of the disease. In many cases complex delusions appear, particularly of grandeur or persecution. Often religion

and hypochondriacal delusions are prominent, particularly of the value of spirits and the danger of the withdrawal of them. In all inebriates there are delusional states, which, while not specifically characteristic of inebriety, always show mental disability and disease. The mind is filled with uncertain, doubtful beliefs and conceptions of the relation of events and things. Imperative concepts, morbid impulses, strange inconsistent reasoning pervades the mind; this, with the pronounced failure of the senses to recognize correctly outward conditions, results in confusion, The inebriate, no matter what the early condition or causes which preceded the drink symptom have been, has always sensorial palsy. The senses are disabled and do not correctly interpret the relation of the surrounding, he cannot understand and compare these relations, and hence all things appear subjectively. Everything is judged by the ego, which decides and determines, and the ego is abnormal, both from spirits and conditions behind the first use of spirits. This grows rapidly, and the power of fixing the attention on any one thing long, becomes markedly weaker. The eye loses its steadiness, and the facial muscles become more and more immobile, or fixed. Hard lines appear, suspicious furtive acts and conduct is noticed. Concealment, with boastfulness of power and dwelling on the weakness of others, is very common. Externally, to a superficial study, no marks of spirit-poisoning may appear. Yet there are certain symptoms of palsy, of lack of power of adaptiveness, lack of control, and ability to compare and estimate without being able to define it. There is intellectual weakness, and another unknown consciousness present, literally another self with other thoughts and motives covered up. This palsy is seen often in a lowered sense of truthfulness, disposition to exaggerate, to alter the facts, to mis-statements without motive or purpose. This in some cases is almost pathognomic of inebriety. The tendency to deviate constantly from the truth, and the inability to adhere strictly to the facts in any ordinary statement, is significant of higher mental palsy. This is almost always present in all cases of inebriates, also in moderate and concealed drinkers, and appears in their language and manner of describing events and experiences. This symptom is so clear in some cases that it impresses itself on all listeners, creating doubts of veracity of the statements. The fact, not well known, is that all inebriates, whether concealed or open, have certain psychological symptoms of brain palsy and failure that are unmistakable. Many persons who are called moderate drinkers have the same symptoms, only less prominent. The condition which precedes the use of alcohol, and the damage from alcohol are registered on the nerve centers and nerve cells to a far greater degree than is generally supposed. Study of these first symptoms of psychological change reveals many new and startling changes.

Hereditary Morphinism in an Infant.

Dr. Lane, (Cincinnati Lancet-Clinic) reports a case of a woman who had used morphine to allay pain at the menstrual period, for six years. She used six grains daily, and after a very severe labor was delivered of a child of normal weight and well nourished. He says in the report:

"Knowing that the babe had been receiving an indefinite amount of morphia through the placental circulation daily for nine months, the important question arose: 'Should we, or should we not, continue to give it in small quantities?' It was decided to withhold it for a few days to see what would happen. This we did. On the first day the child manifested no special discomfort other than a dislike for the breast, which was atttibuted to difficulty in grasping a badly developed nipple in its mouth. On the morning of the second day it began to show symptoms due to withdrawal of its customary stimulant; it refused food, would not grasp the nipple, was irritable and fretful, and showed considerable tremor of the extremities. A small quantity of whisky and broth were given, but this did not seem to satisfy, and toward morning it had grown so wild and noisy that it was impossible to quiet it.

"After unsuccessful attempts at securing quiet, the father started for medical aid, but being some distance in the country, and having had some experience in giving hypodermics to his wife, he decided to try the same on the infant. Accordingly he gave it hypodermically one-twentieth of a grain of morphia. This had no other than a distinct soothing effect as somnolence was not induced, but the child became calm, took its food with relish, and gave no more trouble for the night. No more hypodermics have been required, but small doses by the mouth have been given from time to time when indicated.

"The child is now over three months old, and doing nicely. I saw it yesterday, (June 18th), and it looked as robust and intelligent as any babe of that age I have ever seen; it weighs seventeen pounds, and is growing rapidly. Small doses of mor-

phia are still given when required. The mother has improved in a measure, but is still far from being well.

"There are several interesting features about this case, which I desire to mention before closing:

"1. It shows clearly that the fetus *in utero* may survive despite the fact that large doses of morphia are taken into the mother's circulation, and that injections of this drug in extra-uterine pregnancy to bring about death of the fetus cannot always be depended upon.

"2. It shows emphatically that morphinism may be transmitted directly from mother to offspring *in utero*, provided the fetus survive the period of gestation.

"3. It is my belief that the appetite for the drug will be permanent. Of this I shall report in the future.

"4. It is interesting to note the large dose of morphia (one-twentieth of a grain), hypodermically, tolerated by a new-born infant. The amount through the placental circulation must have been far in excess of that, but the quantity can only be approximated.

"5. The well-nourished condition of the infant, its intelligent appearance, and the fact that it continues to thrive, are points well worthy of thought as they show that even a potent narcotic like morphia cannot always retard or destroy that vital principle we call life."

Gratitude.

The Kansas Medical Journal recently published the following which is worthy of reproduction:

Webster has defined the word gratitude as meaning "A warm and friendly feeling toward a benefactor; a kindness awakened by a favor received." The temper of the human mind is such that apparently it can make no distinction between gratitude and obligation. Either the natural sense of obligation toward a benefactor or the result of custom which recognizes the obligation of the beneficiary, makes the conditions of gratitude and obligation inseparable. The greatest benefits which may be conferred upon a deserving friend are often sources of the greatest annoyance to him on account of the obligation which he feels has thereby been imposed upon him. Gratitude to a friend when the obligation is easily cancelled is usually a pleasant possession; but on the other hand, when the obligation is great no greater injury could be done the friendship. How often the physician is forced to realize this. Many times when he knows that he is rendering his patron a lasting service and one for which he feels the recipient should be forever grateful, he may be pained and surprised to find instead an unexplainable aversion and opposition.

It requires the highest degree of manhood to withstand the temptation to shirk great obligations and to repudiate the debt by an exhibition of ingratitude. That these are facts most every physician has good reason to believe. It is therefore a protection to himself and a favor to his friends to invariably charge a reasonable fee for every service rendered. No ties of friendship or relation should change this rule if a continuation of pleasant relations is desirable.

The Real Value of the Brandt Bath in Typhoid Fever.

Drs. Hare and Holder, in the Therapeutic Gazette for March, 1898, have endeavored to determine the exact value of the Brandt bath in typhoid fever. Their object is not to throw discredit upon this valuable method, but to protest against its indiscriminate and routine employment. They have examined all the data and statistics—domestic and foreign—and have reached the following conclusions:

1. The mortality for typhoid fever to-day all over the world, except in individual epidemics of malignant infection, is not over 15 per cent., and under good nursing and non-meddlesome treatment, about 10 per cent. or less. 2. In American hospitals, under the best men in the profession, the mortality of typhoid fever (with the Brandt treatment) is about 7.5 to 8 per cent., and sometimes 10 or even 18 per cent; therefore the saving of life by the bath is not the difference between 25 and 7 per cent., but between 10 and 7.5 per cent. at the very best. 3. The Brandt treatment does not shorten the attack, but probably prolongs it. 4. Relapses are much more frequent under it. 5. Hemorrhages are more frequent, though the modification of all the symptoms by the bath would lead us to expect a decrease in their number. 6. The frequency of perforation is not diminished. 7. The cold bath is then evidently responsible for a saving at the most of but 2.5 per cent.; and it is also evident that this 2.5 per cent. is saved by the favorable effect of the bath on the nervous system, circulation, respiration, and the toxemia, or the other causes of death remain unaltered in frequency, or are even increased. 8. It is or ought to be a fandamental law in therapeutics that there is no such thing as treatment by hard and fast rules of routine. The recommendation that all

cases of typhoid fever with a temperature of 102 to 102.5 deg. F. shall be placed in a tub of water at 65 deg. to 70 deg. is an affront to this rational law.

The authors then ask the question: Cannot some modification of the bath be adopted, capable of attaining the same ends without the suffering of the patient and the immense labor involved, and without some of the very serious drawbacks now found associated with it? They answer it in the affirmative, and offer the following plan of treatment:

1. When the patient is seen early in the disease, whether he has constipation or moderate diarrhea, a full dose of calomel in divided doses should be given in order to stimulate the liver and antiseptieize the bowels with bile. 2. When the fever reaches 102 deg. F., it should be controlled by sponging. The patient being stripped aud laid on a rubber sheet or blanket, over such a sheet he is to be sponged with water adapted in temperature to his needs, and it is to be remembered the rapid application of a low temperature is more refreshing than the prolonged application of a higher temperature. If this does not bring the temperature down to 100.5 deg. or 101 deg. in twenty minutes, resort should be had to the tub. 3. It is advisable not only to use friction in a light form, but to use moderately active massage. The authors are firmly convinced that by this means bedsores, local congestions and effusions, edematous swellings, peripheral nerve-pains and muscular feebleness will be to a great extent prevented. 4. In nearly all cases more nourishment should be given than the average typhoid patient has usually had in the past. With the exception of broths (which are culture-media for the typhoid babillus) and meats, almost any article easy of digestion should be allowed. 5. Stimulants, particularly alcohol, in carefully graduated doses, should be used whenever the circulation needs them. This is recommended even by the cold-bath enthusiasts to overcome the depression often produced by the bath.

Sleep for Children.

Pediatrics comments editorially as follows:

Some remarkably interesting treatises have been recently published relating to the scientific phenomena of sleep, in which the opinion is held that too much sleep is decidedly harmful, and that the majority of people indulge in the habit to a greater extent than is good for them. Their views, as expressed on the subject in regard to children, are both instructive and novel, and in brief are somewhat as follows: "That even infants at the breast are allowed too much sleep; that they need not only time for sleep but time to be awake if their intellect is to be awakened. It is argued that even during the first four or six weeks of life there ought to be two waking hours during the day, and as the body grows the duration of wakeful period should gradually increase. All methods of putting children to sleep artificially by monotonous sensations are strongly censured, including the crowing of lullabies, and the rocking of babies in cradles or simply in the arms. The approximate period of sleep necessary for children at different ages is given as follows: Between the ages of 1 and 2 years there should be from six to eight waking hours; between 4 and 6 years, nine to eleven waking hours; between 9 and 13 years, fourteen to sixteen waking hours." There is much common sense in the foregoing, but there is also a tendency to rather unduly press the point as to the harmfulness of oversleeping, particularly in the case of very young children. It is no easy matter to fix the amount of sleep by any hard and fast rules.

Digestive Ferments not Needed.

The editor of Modern Medicine, in his classical style, comments on this subject as follows:

The use of digestive ferments which has in the last two decades assumed prodigious proportions, is one of the most stupendous delusions into which the medical profession has fallen by irrational reasoning and false deductions from clinical experience. Think of the immense quantities of pepsin transferred annually from the stomachs of dead pigs to the alimentary canal of human beings! Nobody knows how many tons of extract of pigs' stomachs are thus swallowed; but certain it is that the result would be practically as good if the same amount of some inert and more cleanly substance were swallowed instead, provided the same amount of psychic influence were brought to bear. If some charlatan would put upon the market a brand of ostrich pepsin, it would quickly attain great celebrity, and would boast the endorsement of any number of persons who had realized good results from its use, even though it might be nothing more than powdered starch or sawdust.

Morro's experiments showed long ago that the element lacking in the dyspeptic stomach is not pepsin, but HCl, and his observations have never been shown to be faulty. The writer has carefully studied

the results of more than ten thousand chemical examinations of stomach fluids, made after the methods of Hayem and Winter, and has to record that in less than one per cent. of these cases has there been found any deficiency of pepsin. Unless the peptic glands have been destroyed by cancer or some other degenerative process, pepsin is present in sufficient quantity to do all the work required of it.

This fact has been before the medical profession for years, and yet we go on prescribing pepsin in all its combinations for our patients from mere force of habit; or do we use it as a mind cure?

Anticipating that the pepsin fad is about worn out, some enterprising pharmacists have provided us with various kinds of diastases for the purpose of performing the other phase of stomach digestion—the conversion of starch into maltose and dextrin. Those who make use of this remedy seem to have quite overlooked the fact that nature has provided an efficient diastase factory in the body itself, first in the salivary glands, second, in the pancreas, and third, in the intestinal juice, and, perhaps, also in the bile. But as the first-named only can be of service to stomach digestion, we will neglect the rest. We have had made a careful test of the saliva for diastatic activity in more than three thousand cases, and have not yet found a single case in which this important digestive fluid is inert. The salivary glands are always ready to do their duty when given a chance. We venture to say there is no case which is benefited by the use of diastatic ferments which would not receive more benefit from the use of dry food, whereby the activity of the salivary glands would be called out in the highest degree.

In the treatment of more than ten thousand cases of indigestion of all classes, the writer and his colleagues have made no use of digestive ferments, and have found no occasion for their use. We fully believe that this whole class of remedies, so-called, might be thrown to the dogs without damage to humanity, but it might not be well for the dogs.

Doctors and Church Going.

The Alabama Medical and Surgical Age, in one of its recent editorials, discusses this subject interestingly. The following are a few of the sprightly thoughts set forth:

Before endeavoring to discover the real merit of the question, it may be well to brush aside the well-worn excuse, the palpable subterfuge of being "too busy." Not one physician in a thousand is so busy but that, if he really wishes to attend church, can so arrange his work as to permit of it.

In order to discern the underlying principles involved, let us take the cases of several different religionists: The good Mohammedan determines at some period of his life to endeavor to live more in accordance with the moral laws. He undergoes a moral change; his religious convictions have not altered in the least. He believed as firmly before his moral conversion as after in the dogmas of his religion.

The good Jew resolves to live a better life, and a moral change ensues. There has been no change, absolutely, in his religious beliefs.

A young man raised to believe in the Christian religion reaches a stage where the desire for a better life possesses him, when the beauty of holy living dawns on him. This young man changes his religious beliefs not one iota. He has believed from childhood all the dogmas of the church in which he was reared, just as the Mohammedan believes those of his religion, as the Jew those of the Jewish religion. The whole change is manifestly confined to his moral practices.

When men and women attain this state, be their religion what it may, it is natural and desirable that they should associate themselves with some church, or mosque, or synagogue, where they will enjoy the tremendous mutual and moral support that comes from association with others who are endeavoring to lead the better life. Not only is there moral support derived, but practical business and social advantages are reaped by men who take active interest and part in these organizations. Witness the many sharpers having wholesale confidence games to play that identify themselves in order to successfully use religious organizations as cloaks for their nefarious designs.

In every country physicians are, historically, under suspicion as regards dogmatic theology, whether due to their studies or the nature of their experiences, we will not endeavor to decide; and dogmatic theology is incident to all the world's creeds,

Physicians whose lives are irregular and immoral openly or secretly, manifestly do not join religious organizations unless they do so as hypocrites and for material advantage. Physicians whose lives are regular and moral, who are good citizens, good fathers of families, good men generally in their daily lives and yet refuse the manifest advantages accruing from identification with some religious organization, are open to the historical suspicion of heterodoxy. In truth, for the man whose life is proper

and moral there can be no sufficient explanation except inability to assent to religious dogmas.

Some Clinical and Statistical Evidence of the Value of the Antitoxin Treatment of Diphtheria.

Dr. E. P. Manby (Liverpool Medico-Chirurgical Review.) The clinical effects of the treatment are:

1. An improvement in the general condition and aspect of the patient. 2. An improvement in the local conditions: (*a*) Diminished glandular and faucial swelling. (*b*) Extension of membrane cases. (*c*) Earlier separation of membrane; this has been proved by actual records kept before and since antitoxin was used. (*d*) Diminution, and soon complete cessation, of the foul rhinorrhea. 3. A similar improvement in laryngeal cases, evidenced by diminution in difficulty of breathing, and by actual recovery in many cases without operation, which would previously have required it. Moreover, a marked improvement in the course towards recovery of operation cases. 4. A prolongation of life in cases which terminate fatally—one and a half to three days. 5. No definite effect in pulse or temperature.

Statistical results. in the words of the Antitoxin Report:

1. A great reduction in the mortality of cases brought under treatment in the first three days of illness. 2. The lowering of the combined general mortality to a point previously not attainable. 3. The still more remarkable reduction in the mortality of the laryngeal cases. 4. The uniform improvement in the results of the tracheotomy.

In fact, "a remedy of much greater value in the treatment of diphtheria than any other yet introduced."

The Present Status of the Treatment of Appendicitis.

Dr. J. T. Howell of Newbury, N. Y., read a paper with this title at the March meeting of the Newbury Medical Society. The following is a synopsis of the paper.

Chronic recurrent appendicitis may follow simple catarrhal inflammation of the appendix, or the more severe forms of appendicitis which do not result in total obliteration of the lumen of the appendix.

Mynter, Fitz, Kraft and Hawkins report 688 cases of appendicitis with recurrence in 25.9 per cent.

Mynter estimates from his own and othe statistics that the majority of second attacks occur before the end of two years; and after that time recurrence takes place in only about 9 per cent.

These statements shows the necessity of carefully watching the conditions of patients who have recovered from an attack of appendicitis. The symptoms are often indefinite; the patient ouly complaining of gastro-intestinal disturbances with more or less pain and heaviness in the region of the appendix.

Edebohl's method of examining the appendix by palpation is an important advance in the diagnosis of chronic appendicitis. An appendix which remains the seat of chronic inflammation after two acute attacks should, in the opinion of McBurney, McCosh and others, always be removed, as the third attack seems especially liable to be violent.

The mortality from operation in the quiescent period is very slight. Bull in 442 cases had a death rate of 14-5 per cent.

Among the many rules indicative of operation those suggested by McCosh seem both representative and as complete as the obscurity of appendicitis allows. He believes an operation is indicated:

1. If patient looks ill, and there is vomiting and tympanities with a rapid pulse. 2. If patient looks ill, and there is vomiting, even though pulse and temperature are each under 110. 3. If patient looks ill and pulse is over 110. 4. If there be rapid and feeble pulse and extreme tenderness in the right iliac fossa. 5. If pain and tenderness, at first localized, tend to become general, even though other symptoms may be absent. 6. If local pain and tenderness continue more than two weeks without diminution.

Electric Light in Rheumatism.

Dr. Kozlovski, a St. Petersburg physican, publishes an account of his method of treatment of rheumatism and neuralgia by means of exposure to the electric arc. (Journal of Electro Therapeutics, July, 1898.) He was induced to make these observations by the statement of Dr. Ewald, who is medical officer to some large iron works, that he had noticed that since the introduction of the system of etectric welding there had been a notable diminution in the number of cases of rheumatism, neuralgia, migraine, and other nervous diseases among the workmen, which he attributed to the beneficial effect of electric light. In order to bring this therapeutic agent within the reach of ordinary patients Dr. Kozlovski has fitted up consulting rooms with a suitable plant for producing the electric arc, which consists of a six-horse-power oil engine, a dy-

namo, thirty-five Tudor accumulators, a rheostat, ampere-meter, and electric arc lamp reflector. With these he obtains an electromotive force of fifty or sixty volts a current of from 250 to 300 amperes. The patient is placed at a distance of one and a half metres from the light and protected by blue spectacles and also by a screen of cardboard in which an aperture is cut to allow the light to fall on the affected region of the body. To this it is exposed for from three-quarters of a minute to two minutes. At the time the patient feels a slight sensation of heat, though the temperature is never raised more than 4 deg. F. where the light fall on the skin, but nothing more until six or eight hours afterwards, when itching and tingling are felt and the skin becomes reddened. Some forty-eight hours latter desquamation occurs, which lasts for two or three days. In the course of three months Dr. Kozlovski has treated thirty-eight patients, varying in age from thirteen to seventy years, by the electric light. There were eight cases of sciatica, all of which recovered; four of neutritis (locality not stated,) two of which recovered; eighteen of chronic rheumatism, fourteen of which recovered; three of lumbago, all of which recovered; three of occipital neuralgia, of which two recovered; two of trigeminal neuralgia, one of which was greatly benefited. In most cases three or four sittings produced an amelioration of the pain. They were continued at intervals of three or four days, according to the amount of cutaneous irritation, but the total number of sittings never exceeded a dozen.

Newspaper Medicine.

The Medical Examiner, in one of its recent editorials, comments on this subject as follows:

A great many medical journals have something to say about the practice of the lay press publishing alleged facts about wonderful medical cases and surgical operations, and in truth the medical habit of newspapers is something to be marveled at. Whenever these things are touched upon by newspaper writers the statement nearly always accompanies them that the doctors were puzzled, or there never was another instance of the kind on record, and then follows an elaborately written and illustrated article to suggest that there had been a medical inspiration in the matter, but that the filtering reporter was not able to retain the essential facts and language for record and therefore made what is known as "a bluff at it," with the usual ridiculous results. In many instances the name of a medical light appears, or one is quoted, often the operating surgeon or attending physician. At any rate the things treated of oftentimes have never been heard of before, and certainly never so presented to the public. In this city we have several Sunday newspapers which are wonderfully interesting as quasi-medical journals, and one evening journal with a therapeutical department.

Talking about therapeutical departments, reminds us of the great department-stores. Some of them have drug-departments with a physician or dentist attachment; also occasionally a lawyer on tap. Medical and legal, or any other kind of advice, we are told, may be had for a small fee, or as a chromo upon purchasing a certain amount of goods. They are wonderful, these finde-siécle improvements.

The Treatment of Hoarseness in Singers and Public Speakers.

Dr. F. A. Bottome, according to the Laryngoscope, June, 1898, states that singers frequently become hoarse due to the fact that they are constantly exposed to sudden variations of temperature in going back and forth between the dressing-room and stage. In treating these cases it is not desirable to employ local treatment in the early stage. To relieve the congestion the patient should be given a hot mustard foot-bath and put to bed. After a dose of ten grains of calomel, aconite should be given up to the physiological effect and cold should be applied externally. The throat may be sprayed with some soothing application, such as albolene. The patient must not utter a word, making his wants known by writing. After twenty-four hours or more of this treatment there should be decided improvement. It is then proper to resort to the use of tonics. This writer's preference is the tincture of the chloride of iron, in doses of half a drachm in glycerine and water, administered after meals. It should be continued three times daily in increasing doses for a number of days. If the larynx is still generally congested, nitrate of silver (ten grains to the ounce) may be applied as a spray. There is frequently only a narrow line of congestion visible along the edges of the cord, and then a solution of menthol (one drachm to the ounce of albolene) should be applied to the cord with a probe. The patient is by this time usually so much better that he is anxious to try the voice. This should be done very gradually in the middle register only, going up and down the scale. The patient should be infused with a large degrec of

hope and given as much confidence as possible at the time regular singing is resumed. Itis well to make a local application between the times of singing, or see to it that the body is well rubbed down with alcohol.

The sudden accumulation of mucus on or between the vocal cords is a common cause of hoarseness or of a sudden "breaking" of the voice, even in singers apparently in excellent condition. The treatment consists of deep inhalation of menthol dissolved in albolene, using an inhaler, together with the use of the same solution in a hand atomizer by the patient just before singing or speaking, so as to prevent the dislodgement of the mucus from other parts and its deposition on the vocal cords at this time.

Treatment of Dysmenorrhea.

Dr. S. Keith (Therapeutic Gazette) recommends keeping the feet warm as a preventative in this disease. Great attention, he says should be paid to this point, and if a growing girl show a tendency to cold feet, she should be dressed warm and have a hot watér bottle at her feet at night. The general health should be attended to. Exercise in fresh air and the avoidance of too exacting lessons are important. As soon as the menses make their appearance, if the girl shows any symptoms of dysmenorrhea, she is to be kept constantly in bed, and not allowed to get up until the pain is entirely gone, and the flow is either over or almost so. A large poultice should be kept over the abdomen, as long as there is any pain. A saline draught at the commencement, with a mild diaphoretic and a small dose of potassium or sodium bromide will prove very serviceable.

When the dysmenorrhea has lasted for some years, this general treatment will not often effect a perfect cure, but it should nevertheless be tried in all cases, where the pain is not very severe, for six months or a year; and it should be explained to the patient that this treatment is not meant as a temporary relief only, but is expcctcd to cure permanently. Little difference exists as to the general treatment of such cases but the opinions as to the local treatment vary very greatly. Some recommend the use of stem-pessaries; some advocate dilatation, slight or great, with or without curetting; and some say the best results are obtained by lateral or posterior division of the cervix. The author highly recommends a modification of the last method, namely. posterior division of the cervix with stitching. This modification makes such a great difference in the results that it is practically a new operation. What is aimed at may briefly be described as the straightening out of the uterine canal, and the healing of the cut surfaces by first intention, so that there will be no hard tissue, or any possibility of the old bend returning. The most essential part of the operation is the accurate stitching together of each half of the wound made when the cervix is divided. Performed with the uterus in its natural position—i. e., without drawing the cervix to the outside—with the aid of a Sims' speculum three-quarters of an inch across, it can be done without rupturing an ordinary hymen, but it is not an operation to be undertaken by those who have not the required dexterity. By this operation nothing is left to chance, and unless the cuts do not heal, the cervix remains permanently in the position and of the shape it is left at the time of the operation. All the cases he has operated on in this manner have been cured or improved; not only as regards the dysmenorrhea was the effect good, but also as regards the general health. Where an operation is absolutely refused, electricity by Apostoli's method will do good.

New Treatment of Inebriety.

Dr. Edward H. Dewey (Journal of Inebriety, July, '98) claims to have had great success in the cure of inebriates by limiting the time for eating to two meals a day. He believes that the origin of inebriety in many cases is in the nursery and during the first years of life. At this time the brain and nervous system is injured by food decomposition, and actual poisons generated through inability of tbe system to utilize and eliminate the surplus nutrition. This is largely increased by remedies, soothing syrups and other drugs, to allay the irritation. The stomach is strained with the chemical changes from foods that are unused and decomposed, and the vitality is exhausted; thus permanent injuries are started which, later, call for alcohol and narcotics. Later, the indiscriminate foods taken at irregular, short intervals still further impair the nutrition and increase the sources of poison in the body. Young persons eat at all times and places most indigestible foods, and then use beers and other alcohols to conceal the distress that follows. Young men who eat more food than is essential for the nourishment of the body find some relief from beer and wine at meals, or at night before retiring. This is literally increasing the chemical changes and autointoxications, and lowering vitality, creating more irritations, for which alcohol is a most grateful narcotic. The stomach and digestion generally are not only diseased, but

enfeebled and incapable of doing its natural work. Alcholic and other disease come on, the nervous system and mind suffer, and serious changes follow, of all the organs. The remedy for this is rest, using food only twice a day, at 11 a. m. and at 5 p. m., totally abstaing in the intervals. No special foods are prescribed only to use meat sparingly if the person is a brain worker; if a muscle worker and out in the open air, more meat may be used safely. No tea or coffee, but water and milk should be used. Foods should be simple and not complex in variety or poor in quality. Dr. Dewey claims that as a result of this abstinence all desire for spirits will cease, and the taste for tobacco pass away, and that in most cases a radical cure will follow. He very wisely says that this is very apparent in the curable cases, or in persons who have a sufficient vigor and mentality to remain cured after once recovering. All experience indicates that abstinence from food and improved digestion is a most valuable remedy in many cases. Impaired and defective nutrition in early life is very often a starting point for inebriety later in life Often when inebriety has begun, profound changes of digestion appear, and Dr. Dewey's plan of two meals is rational and very practical. If the specific hunters had sagacity to combine some wholesome rules of hygiene with their faith remedies, better results would have followed.

Senile Uterine Catarrh.

J. H. Croom, in the Medico-Surgical Bulletin, July 25, 1898, in discussing the subject of senile uterine catarrh, or post-climacteric endometritis, remarks, that a due appreciation of it would save many an unfortunate woman from hysterectomy, the differential diagnosis from malignant disease not being as difficult as one might believe.

Three typical examples are detailed, illustrating what the writer considers the three forms of senile uterine catarrh: 1. Those associated with fetid discharge and no hemorrhage; 2. Those associated with leucorrhea and slight hemorrhage; 3. Those in which hemorrhage is the main, if not the only symptom. The symptoms are extremely like those of malignant disease, the patient suffering from vaginal irritation and showing marked signs of general cachexia, the skin becoming sallow, and general emaciation sets in. This is really due to a slow sepsis, which is further shown in occasional rigors and night sweats. The vaginal discharge is watery and semipurulent, though frequently it coutains a considerable amount of blood. The odor is, as a rule, most offensive, in some cases more so than in marked cases of cancer. Along with these symptoms there is frequently a certain amount of abdominal pain, pains in the back, and progressive invalidism. With regard to the differential diagnosis, the following points are worthy of consideration: First, in most cases of primary fundal cancer, periodic and severe pain is an early and prominent symptom; whereas in senile, uterine catarrh the pain is irregular and colicky, or, if not, it is slight and constant. Second, in cancer, fetid discharge, at least in the earlier stages, is unusual, because the os is closed and the surface of the cancer is protected from external influences, whereas in catarrh, especially in the first two forms mentioned, fetid discharge is a prominent and early symptom. Third, local examination in cancer finds the uterus distinctly enlarged, sensitive, and early becomes heavy and fixed; whereas in the simpler condition the uterus either is normal or only slightly enlarged, and remains freely movable throughout. Fourth, dilatation and local exploration reveal the presence of a neoplasm in the one case and the absence of all irregularities in the other. As regards the causes of this senile condition of the uterine mucous membrane, the author can assert nothing positive; at the same time he strongly insists that it is not prodromatic of malignant disease, a case of the simpler condition never becoming later one of cancer. The treatment suggested is that of rest, hot douches, the administration of arsenic, strophanthus, and Chian turpentine. The application of caustic by means of dressed sounds, or, still better, curettage, with packing and drainage, is strongly advised.

Silver as an Antiseptic.

Credé, says the Medical Bulletin, has succeeded in obtaining a metallic silver preparation which was permanently soluble both in water and albuminous fluids. When this preparation is inuncted in the form of a salve for from fifteen to thirty minutes, it is absorbed into the lamphatic channels and circulates dissolved in the body. In sterile lymph and sterile blood it remains in the condition of metallic silver. In the presence of pathogenic germs or of toxins it enters into some as yet unknown combinations, and acts either as a bactericide or as an antitoxic agent. The use of the silver preparation causes no local changes. Credé and the physicians associated with him treated over one hundred cases affected with the most varied septic diseases with the

remedy. The first inunction was made in the evening, and the second upon the following morning, and no other measures were employed during this time. The amount of the salve used in the adult was, as a rule, 3 grammes (45 grains); for boys 2 grammes (30 grains), and for little children 1 gramme (15 grains). The inunctions were practiced upon a part of the body far removed from the site of the disease. Lymphangites, phlegmons, septicæmias, phlegmonous anginas, and septic complications of scarlatina and diphtheria were treated. In all the cases a remarkably favorable effect was apparent in from five to thirty hours. The general condition improved, the fever fell within twenty-four hours, and rapid retrogression of the septic process set in. Almost hopeless cases rapidly improved.

The Cheerfulness of Doctors.

A reason for this cheerful temperament is doubtless to be found in the type of men entering the medical profession. The nervous, the timid, the dyspeptic, and the invalid do not readily take to the doctor's calling. It demands too much energy, fortitude, and capacity for human intercourse. Only those endowed with strong and virile temperaments are fitted for the calling or likely to embrace it. The intensity and super-abundance of this initial virility is powerfully exemplified in medical students, who are not notable for the repose of their manners or the gentleness of their instincts. How much of a residuum of high animal spirits remains in matured and aged members of the medical fraternity is often shown at the annual functions of our medical societies, in which long-repressed hilariousness sometimes assumes a somewhat boisterous form. It is because medical men are, as a class, of a peculiar virile and fluid nature that they are cheerful and resourceful.

Alcohol and Health.

The greatest quantity of alcohol which a healthy man can take in twenty-four hours without injury has been estimated by Parks, our greatest authority on this subject, at two fluid ounces, or rather less than an ordinary sherry-glassful. This corresponds to about four glasses of port, or five glasses of sherry, madeira, or marsala, or from half a bottle to a bottle of claret, burgundy, hock, moselle, or Muagarian wine. It must be remembered that this is the extreme limit, and that it by no means follows that because a man may take this quantity without being the worse, he will be the better for taking it.

The Morphine Habit as a Legal Defense.

We take the following item from the July issue of the Journal of Inebriety:

A kleptomaniac in one of the British courts plead guilty and her counsel assured the bench that she was in no want of money, but had sufficient means to enable her to live comfortably, and asked that she be treated leniently on the ground that the theft was due to the effects of the excessive use of morphine. According to the testimony, she had consumed ninety-six grains of morphine in a single week. The magistrate suspended judgment, upon the defendant giving security in £50 to appear for sentence when required. De Quincey's daily consumption of laudanum was nine ounces, and there is a case on record where 120 grains of opium was taken at once without producing death. The tolerance of opium and its salts proves in reality much more than old women's fables, and instances of enormous doses are in the possession of nearly every family practitioner. A poisonous draught of laudanum cannot be meaured by cases on record.

Malignant Syphilis.*

At a meeting of the Society of Internal Medicine of Berlin Dr. Golz presented a young girl who had entered the Moabit Hospital on account of a severe syphilis which resisted all treatment. The ready occurrence of salivation was an obstacle to treatment, and a generalized eruption of partly-ulcerated papules rendered inunction impossible. Injections of sublimate did not prevent the evolution of the disease and particularly of large ulcers of the throat and tongue. The epiglottis was completely lost. An energetic treatment by inunction was, nevertheless, instituted, although a pleurisy developed, the effusion of which was gradually absorbed. Soon afterward a catarrh of the apices of the lungs occurred, but microscopical examination did not show the presence of bacilli in the sputum. Treatment was abandoned in favor of a reconstituent diet, but the body-weight diminished and fell to 76 pounds. Ulcers of the mouth, and arthritis of the knee followed, the last named being dissipated by mercurial inunction. The patient soon left the hospital in a comparatively satisfactory condition. Several months later there was not a syphilitic symptom, and the catarrh of the apices had almost completely disappeared. The latter was, therefore, probably, of syphilitic nature.

*Medical Bulletin, July, 1898.

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Sedentary Employments.

Very little observation, says the Maryland Medical Journal, will suffice to convince any one of the difference which exists between those who follow sedentary and those engaged in outdoor occupations, as far as their physical appearance goes. The city clerk, the employees in shops, and those who follow sedentary occupations, whether male or female, do not usually present anything like the healthy appearance, nor have they the coloring, the healthy facial expression, or the robust aspect and upstanding carriage of those who live in the country or at the seaside, or of those who follow an out-of-doors life and take sufficient physical exercise. But making every allowance for the depressing effect of sedentary habits and occupations in these respects how much of it is avoidable and attributable to the unhygienic conditions, personal and otherwise, under which such occupations are carried on? It will be frequently found that the offices, rooms and places of business in which clerks and others are employed for the greater part of the day are small, badly lighted, ventilated and warmed; that the air is more or less stagnant and foul, owing to complicated or bad structural arrangements, with probably narrow, tortuous, dark passages; that the water closets are improperly placed, and that a good deal of overcrowding exists. Now although a sedentary life is not, of course, the healthiest kind of life, it is, nevertheless, more or less healthy in proportion as the local conditions are healthy or otherwise. Clerks and city employes are not generally robust folk; they usually possess a feeble circulation; their work is nerve exhausting, entailing, as it does, various degrees of mental tension and strain of eyesight, and sedentary work is, moreover, cold work. Those employed are liable from the nature of their duties and the closeness of the atmosphere in which they have to pursue them to headaches and a feeling of exhaustion which probably induces many of them to have recourse to "nips" of alcohol. The necessary remedies obviously are fresh air and light, together with warmth; the incoming air requires to be warmed during the greater part of the year in this this climate. Business people in the city, even to put the matter on merely economical grounds, do not practically get the best attainable out of those in their employ, for want of proper care and attention to these details, to say nothing of the inconvenience and pecuniary loss arising from frequent absences from temporary causes of ill health. Great improvement has no doubt taken place of late years, and most of the banks and large city offices are well provided in these respects, but there still remains much to be done which could be effected if enlightened views about the laws of health and hygiene were more generally recognized than they are.

Baptist Sunday School Chautauqua, Shelby, N. C., August 23rd.

In addition to the very low rate of one fare for the round trip, for the use of the visitors to Shelby, the Seaboard Air Line will run, on August 23rd, a Special Train, the Chautauqua Special, from Weldon to Shelby, on the following schedule. Leave Weldon at 6:00 A. M., Littleton 6:30 A. M., Henderson 7:35 A. M., Raleigh 9:00 A. M., Sanford 10:20 A. M., Southern Pines 11:10 A. M., Hamlet 12:00 Noon, Rockingham 12:11 P.M., Wadesboro 12:45 P. M., Monroe 1:45 P. M., Cearlotte. 2:30 P. M., Lincolnton 3:23 P. M. Leaving time at other stations may be obtained from Ticket Agents. Train will arrive at Shelby 4:00 P. M. Write to or see Agents or representatives for particulars of the trip and rates.

J. T. Anderson, G. P. A.

Bromidia.

The hypnotic effect of Bromidia does not by any means represent the sole benefit to be derived from this preparation, but it meets in a very perfect manner, many other indications involving hyperæsthesia of nerve tips and over-excitability of spinal cord. In doses of one-half-teaspoonful, given every four hours for two days, will so benumb the sensory nerve tips of the buccal cavity that dentists can take impressions of the mouth, fit in rubber dams, etc., that would otherwise be impossible on account of the gagging peculiar to some patients. In the hands of the medical practitioner, given in half-teaspoonful doses every four hours, will make life endurable for hay-fever patients during the months of August and September. A teaspoonful will completely quiet the paroxysmal pain following childbirth or miscarriage without in any way interfering with uterine contractions.

Stranger—Give me a ticket to Mobile. Confound the luck! I was to get to Mobile Thursday, and it's Thursday now. I won't get there before Saturday. Southern Ticket Agent—Yes, you will, mister. This is last Thursday's train just coming in. We're two days late. You're in luck.

THE BEST PREPARED FOOD.
FOR THE BABY, THE INVALID, THE CONVALESCENT, THE AGED.
HIGHEST AWARDS WHEREVER EXHIBITED.
IT CONTAINS NO CANE SUGAR, NO GLUCOSE, NO MALT.
IMPERIAL GRANUM
NOURISHING STRENGTHENING.
PURE SAFE
PALATABLE RELIABLE
IS THE STANDARD PREPARED FOOD OF TO-DAY AND WILL CONTINUE
NEARLY ALWAYS SUCCESSFUL WHEN ALL OTHER KINDS OF NOURISHMENT HAVE FAILED.
SAMPLES FOR CLINICAL TEST SUPPLIED TO PHYSICIANS AND TRAINED NURSES ON REQUEST.
TO YIELD SATISFACTORY RESULTS IN NUTRITION
FAR INTO THE FUTURE, BECAUSE ITS MERITS HAVE BEEN
PROVED BY CLINICAL SUCCESS IN THE PAST.
Shipping Depot, JOHN CARLE & SONS, 153 Water Street, New York.
SOLD BY DRUGGISTS EVERYWHERE.

Treatment of Stone in the Bladder When Associated with Hypertrophy of the Prostate.

E. L. Keyes (Annals of Surgery, May 7, 1898) concludes:

1. When the stone complicate enlarged prostate, if the condition of the latter be such that were the stone absent no operation would be called for, then the whole question is to be solved by deciding whether the obstructive quality of the prostate enlargement, the size of the bar, the depth of the bas-fond, the irritability of the prostatic urethra, * * * be sufficiently accentuated to make litholapaxy impossible, or to make it possible only at the expense of having the patient (as to his subjective symptoms) worse than before.

If such conditions do obtain, then the stone should be removed by the knife.

2. In short the main matter is one of diagnosis. 3. The mere size of the prostate is not a factor in the problem. 4. The size or position of the stone is not a factor, except in the case of encysted stone, or one too large for the lithotrite to grasp, or in case of a foreign body. 5. If lithotomy be performed, the suprapubic route should be the one elected, since this opens the door for more perfect work and allows the surgeon to remove obstructions, and to lower the vesical ends of the urethral floor. 6. Finally, here, as elsewhere in surgery, the only safe, practical guide is surgical judgment, based upon diagnosis, guided by experience.

Sanmetto.

I have been using Sanmetto for the past three years in my practice. Have prescribed it in chronic cases of irritable bladder, urethral canal, irritable and enlarged prostate glands, sexual perversion, dropsy and cystitis. I have found, and know it to be an excellent remedy for all the above named diseases. I am more than much pleased with Sanmetto. Every physician should be made acquainted with Sanmetto.

J. P. HAWKINS. M. D.
Avondale, Ala.

WANTED—TRUSTWORTHY AND ACTIVE gentlemen or ladies to travel for responsible, established house. Monthly $65.00 and expenses. Position steady. Reference. Enclose self-addressed stamped envelope. The Dominion Company, Dept. V., Chicago.

Malaria as a Causative Factor in other Diseases.

First, malaria is not the cause of so many evils as are attributed to it; secondly, that its favorite seats of attack after the blood and blood-making organs are the gastro-intestinal and central nervous system, and that other organs or systems are but rarely affected; thirdly, and not least important, that the cases supposed to be malaria should in the future be more carefully studied, and that hereafter it should not be given as a cause of existing evils without sufficient and abundant proof. If the blood cannot be examined, then only a full history of the case should be accepted, in which the fever, spleen, and effects of treatment are carefully noted. The article is closed by the following quotation from Laveran's work:

"The great frequency of accidents occurring in malaria has been much exaggerated; some observers have come to attribute numberless complications to it, and in the diseases of the warm countries see, so to speak, only various types of malaria. Authors have described an ophthalmia, a urethritis, a rheumatism, all due to malaria. All diseases may be associated with malaria; the condition of anæmia and feebleness which rapidly brings about, cause of themselves a true predisposition for certain affections like pneumonia and dysentery. The error of those who attribute to malaria all the maladies which may complicate it, or even greater number of those which have been observed in malarious countries, is certainly not small."

American Opinion of France.

The following extract from the New York Medical Journal seems to be popular in England judging from its extensive reproduction in the English medical press:

"We have talked a good deal about the birth of this Republic a century and a quarter ago. We have claimed that we attained our majority and were entitled to take our place among grown-up nations by fighting our civil war to a finish. But since our little fracas with Spain, we have discovered that many of the great Powers have been indisposed to grant us an adult's prerogatives.

"The funny thing about it all is that the nations most discourteous towards us are the ones most feebly doddering along the road to senility.

"France has been particularly offensive, though there is some excuse for her conduct by reason of the fact that Americans have long accepted unquestioningly her tawdry make-believe wares and have servilely imitated her vapid ways.

"The French are probably the most puerile of people after the Spanish, and we should burn with shame to think that we have been their slavish imitators; but then we know that very young and estimable persons often set up for a time worthless objects of worship, and the United States is young, very young yet.

"France for many years has been draining away from this country its vitality, and giving nothing in exchange but its shallow ideas and meretricious wares.

"France is a country of unspeakable vices, unworthy of the consideration of stawlart self-respecting nations of the Roman Empire at the time of its grossest lasciviousness."

Micro-Organisms of Syphilis.

According to the Post Graduate Dr. Van Niessen at the sixteenth German Medical Congress demonstrated the micro-organisms he had found in the primary sore of syphilis, in the epiphyses of hereditary syphilis, and in the blood, especially that obtained by cutaneous incision, since the bacteria seemed to be distributed on the surface, of tertiary syphilitics. He believed that no single form of micro-organism was responsible for the manifold lesions of syphilis, and his demonstration included such varied forms as staphylococci, diplococci, and streptococci, as they were found in various characteristic lesions of syphilis. These took the ordinary stains, the carbol-fuchsin and Gram's being the two methods used in the specimens exhibited. The micro-organisms had undoubtedly been seen by other observers, but the fact that Virchow admitted to his Archiv some time ago one of the author' articles, and after this the Russian Government called the author (Van Niessen) to St. Petersburg to continue the distinguished Spreck's researches into syphilis, gave these discoveries an extraneous interest. Van Niessen claimed to have produced syphilis-like lesions in hogs by the injection of specific injectious material.

I have prescribed Seng successfully on several occasions, and I regard it as a valuable remedy when used in suitable cases. In one obstinate case, in particular, it has proved of greater service than anything formerly prescribed, and I shall revert to it in future with increased confidence in the result.

H. H. Birkott Wilkinson, M. D.
L. R. C. P., L. R. C. S., L. M.
South Grove, Rotherham, Eng.

Practical Evidence.

I used your sample of Resinol on myself for Pruritus Ani, which has been my curse for several years, defying all applications. The first application proved efficacious, and I am now using and prescribing Resinol for the above and several other itching troubles. In fact, I think it is the best remedy I have ever used for the diseases for which it is recommended.

H. B. LEIGHTON, M.D., Boston, Mass.

I have used your Resiuol in Inflammatory Rheumatism with happy results. Hope others will try it. I know they will be pleased.

E. J. BURNSIDE, M. D., Phila., Pa.

It gives me pleasure to say that Resinol is the best application for local treatment of Eczema I have ever used. I can also bear testimony to its efficacy in Erysipelas, and its soothing and healing virtues in all inflamed surfaces.

A. S. FRENCH. M.D., Lawrence, Mass.

It is but just that I should attest my satisfaction with the use of Resinol. It is a marvel of efficacy in Pruritus Ani. In relief of soreness, due to scalding from acute Nasal Coryza, it acts like a charm.

J. H. THOMPSON, M.D., Goshen, N.Y.

Resinol is by far the best application I have ever used in a practice of 48 years for the diseases recommended. A case of Eczema commencing on the scalp and extending over the entire face and which had been under the treatment of various physicians with no apparent benefit, was completely cured by it in less than two weeks.

J, J. WORTHY, M.D., Lavalle, Wis.

I am very much pleased with the effects resulting from the use of Ung't Resinol in cases of Itching Piles, Pruritus Ani, and Vulvae, Eczema, Erysipelas, &c. In fact it is the remedy "par excellence" in all cases where there is a Congested or Hyperaemic condition of the capillary Blood Vessels. C. D. SMITH, M.D., Atlanta, Ga.

I frequently prescribe Resinol, and am well pleased with its work. It has proved very useful in many forms of eruption of the skin, and especially so in Pruritus Vulvæ or Ani, and in Eczema of other parts of the body.

LUCY HALL BROWN, M.D., Brooklyn, N. Y.

I take pleasure in stating that I have found Unguentum Resinol almost a specific for Pruritus Ani, Itching Piles and Marginal Eczema.

HENRY HUG, M.D., Detroit, Mich.

Resinol is a harmless antiseptic and a true skin anæsthetic, absolutely non-irritant and non toxic (free from lead, mercury, or cocaine), can be applied to mucous, excoriated or denuded surfaces of any extent at any age without fear of untoward results, and is not contra-indicated by any internal medication that may be deemed advisable.

Resinol is put up in *one ounce* jars at 50 cts. each, and can be obtained at any drug store. **Sample** sent **free** on application, or **one** regular size jar for trial on receipt of 25 cents.

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The Doctor as a Speculator

As a result of the war American Securities have not reached the high levels which they should have and which they undoubtedly will upon the declaration and the final consummation of peace. This makes **the present time an exceptional one FOR SPECULATION.**

The selection of your broker is as important as the stock bought and sold. Our position, facilities and advice will aid you in conservative operations in the market which must result in financial gain for yourself. We carry the accounts of a number of well-known Doctors in this country, and can add to your income. Write for a book on how to speculate, and for high and low prices on stocks. You can buy and sell stocks by telegraph at our expense. We charge 1/16 commission and a small margin will allow you the **possibilities of large returns.**

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Peacock's Bromides.

I have pleasure in stating that I have used Peacock's Bromides extensively, both in private and in hospital practice and have found it of great and trustworthy value in the treatment of diseases of women, more especially about the climacteric, it frequently greatly diminishing the severity and frequency of those neurovascular symptoms as "hot blooms" especially when combined with Sig. trinitrini B. P. (M. ½ M. T); those distressing symptoms of depression and restlessness are much benefited by its exhibition. Its great advantage over the prescribing of the simple salts is in the disguising of their saline taste and the presence of carminitines certainly gets over the very real objections that previously existed to prescribing large doses of the bromides and I am confident that Bromism is less soon produced when Syr. Brom. Com. (Peacock's) is given.

J. COURTNEY MACWATTERS, M. D., M. R. C. S., ENG.; L. R. C. P., London; Resident Obstetric, and Gynecological Officer to the Royal Infirmary, Bristol.

Sore Throats and Milk Supply.

Prof. Matthew Hay, in discussing an outbreak of scarlet fever in Aberdeen, writes: "There is no doubt in my own mind, from a full consideration of all the facts, that in spite of the practically negative result of the inspection of the farm, this farmer's milk was the source of the epidemic. The probability is that we had to deal with the occurrence in the farm household of one of those exceedingly mild attacks of scarlet fever which happen so often nowadays,and which frequently go quiet unnoticed. Nothing more may be observed than a slight sore throat for two or three days, with slight unwellness; and if it occurs in a child the parents may not have noticed it, and the child, when questioned cbout it a few days latter, is found to have forgotten about it. In certain of these cases even desquamation, which comes on in the latter stages of the disease to aid the diagnosis, may be wanting, or so slight as to have escaped observation. The outbreak, however, enforces the need of very careful attention to the state of health of persons in or about dairies. Sore throats should always be regarded with the greatest suspicion—they may be symptomatic of scarlet fever or diphtheria —and, if at all practicable, persons so suffering, or persons who feel fevered, should not be premitted to milk cows or to handle or go near the milk. Young children, who are so susceptible to infectious diseases, and who are so often suffering from one or other of infectious diseases, should never be allowed to take part in a dairy in handling or washing milk vessels or in carrying milk, and should, indeed, be kept strictly outside the milk-house. Fortunately, all the cases of fever in the present outbreak have been mild, and in some instances as mild as the case from which the infection may have sprung. This, perhaps, may be held to support the theory of infection from an unnoticed mild case. It has reproduced its own type."

Sanmetto in Urethral and Bladder Diseases —In Pre-Senility and Enlarged Prostate.

In nearly thirty years practice I have never written to the proprietors of any medicine extolling its virtues, but after some years constant use of Sanmetto I can but say it is my sheet anchor in all urethral and bladder diseases. In pre-senility it has no equal. Have recently used it in two cases of enlarged prostate, with marked benefit in both cases,

GEORGE E. GILPIN, M. D.
Berkeley Springs, W. Va.

Causes of Infantile Diarrhœa.

Symes (British Medical Journal, May 8, 1898) says defective water supply appears to affect the older children over five years of age, but infants are swept away in hundreds by milk which is infected or contaminated. The greater number of fatal diarrhœas are doubtless due to artificial feeding. All organisms grow and flourish in milk.

In a study of thirteen cases Cumston draws the following conclusions:

1. The bacterium coli appears to be the pathogenic agent of the greater number of summer infantile diarrhœas. 2. This organism is the more often associated with the streptococcus pyogenes. 3. The virulence, more considerable than in the intestine of a healthy child, is almost always in direct relation to the condition of the child at the time the culture is taken and does not appear to be proportional to the ulterior gravity of the case. 4. The mobility of the bacterium coli is in general proportional to its virulence. The jumping movement, nevertheless, does not correspond to an exalted virulence in comparison with the cases in which the mobility was very considerable without presenting these jumping movements. 5. The virulence of the bacterium coli found in blood and other organs is identical to that of the bacterium coli taken from the intestine of the same individual.

S. A. L. Photographs.

The Seaboard Air Line has for distribution to its friends and patrons, some typical "Coon" pictures. These are Photographs, 22 x 28 inches and handsomely framed. To cover part of the cost of the Photographs and Expressage, they are sold at $2.00 each. They can be secured from the Representives of the Seaboard Air Line or upon application to J. T. Anderson, General Passenger Agent, Portsmouth, Va., who will also be glad to send printed matter relative to Rates, Summer Resorts, &c.

The Columbus Phaeton Company, Columbus, Ohio, are the only factory, to our knowledge, that give a guaranty covering a period of two years from date of purchase, with each vehicle that they sell. This guaranty is of great value to the purchaser for it means that the vehicles are so well built that the factory have confidence in them and will not be called upon to replace or repair under their guaranty. The Columbes Phaeton Company are always, not only willing, but anxious to make anything satisfactory, that is not right.

The Trinity of Therapy.

ANALGESIC · ABSORBENT · ASSIMILANT

RHEUMAGON

A SPECIFIC FOR ALL RHEUMATIC CONDITIONS AND FIBROUS INFLAMMATIONS. LUMBAGO, ARTHRITIS, AND ALLIED DISEASES. ANTI SYPHILITIC ANTI-SCORBUTIC ANTISEPTIC.

POWDER

LOCALLY IN LESIONS ULCERS SKIN DISEASES DUST OVER SURFACE. IN INFLAMMATIONS USE WARM POULTICES OVER AFFECTED SURFACE.

MELACHOL

PROMPT PAINLESS PLEASANT LAXATIVE.
STRONG NERVINE:
ABSOLUTE ANESTHETIC
ANTIDOTE TO MORPHINISM
THE ONLY SUPPORTIVE ELIMINANT.

TABLETS

THE MOST POWERFUL DIGESTANT OF ALL THE ELEMENTS ENTERING INTO THE ORGANISM. RELIEVES DYSPEPSIA, FLATULENCE, COLIC AND INTESTINAL DISORDERS CONVERTS PROTEIDS INTO BLOOD PLASMA. NOURISHES STRUCTURE CELLS AND FUNCTION.

PHASELIN

FORMULAE

RHEUMAGON, A COMBINATION OF THE IODIDES AND PHOSPHATES OF SODIUM.
MELACHOL, A REDUCED CHEMICAL COMBINATION OF PHOSPHATES WITH NITRATES OF SODIUM.
PHASELIN, THE DESSICATION OF PHASOLEUS THE EGYPTIAN AND MEXICAN VARIETY OF THE GENUS PHASELUS

Described by HIPPOCRATES as Δολιχος a Bean possessing strong digestive powers, a strong supporter of function a positive cure for the gastric catarrh of alcoholism A general healing remeby of all local lesions Ulcers and Eruptions A Specific as a poultice in all ophthalmic inflammations.

· RHEUMAGON · MELACHOL · PHASELIN ·

THE THREE MOST VALUABLE CONTRIBUTIONS TO MODERN THERAPY COVERING MOST OF THE PATHOLOGIC CONDITIONS OF THE ORGANISM USED SUCCESSFULLY IN ALL HOSPITALS AND BY CLINICIANS GENERALLY. PHYSICIANS will be furnished full size bottle **FREE** on payment of Express or Mail charges. PLEASE name Journal in which this card appears.

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SEND FOR LITERATURE.

Anti-Phymin.

One of the most remarkable recoveries so far reported is from the practice of Dr. Roger Atkinson, of San Marcos, Texas, a gentleman well known and highly esteemed by the medical fraternity of Texas, whose ability as a conscientious and ethical physician none can question. He says:

"About the middle of last April, 1897, I placed Mrs. Dr. Pendleton, of this city, under your remedy. For several years her case has been well known to be that of consumption, and at the time I placed her under your remedy I considered her case hopeless. She was confined to her bed, having hemorrhagess every day or so, and too weak to sit up at all. No appetite nor power to assimilate, high fever, constant cough, etc.

"I told her frankly she would certainly die soon unless your remedy gave her relief, and that I could offer her no other hope. I have given her no other medicine from that day to the present time. She is to-day a well woman, with no signs of the active disease. Appetite and digestion apparently perfect. She sleeps as sound as a child, which she has not heretofore done for ten years, and can and does work from eight to ten hours each day. If your remedy does as much for others as it has done for her, then indeed it is a godsend to suffering humanity."

Subacute and Chronic Diarrhœa.

In the later stages of acute diarrhœa and in the chronic forms of this disorder it is quite often necessary to resort to the use of some remedy which will constringe the relaxed intestinal mucous membrane, restore its tone, and arrest the profuse and exhausting discharges. To effect this object a selection must be made among the group of the newer intestinal astringents, and of these tannopine appears to be the most efficient, as it is the most recent. This remedy passes unaltered through the stomach, and when it reaches the alkaline fluids of the intestinal canal, its astringent principle is gradually libe rated and exerts its curative action upon the inflamed mucous membrane. Owing to its slow and gradual decomposition, its effects extends down to the lowermost portion of the intestinal canal, and hence it becomes a valuable remedy in many forms of intestinal disease attended with diarrhœa. In cases of gastro-enteritis, cholera morbus and infantum, after all irritating material has been removed from the alimentary canal by laxatives, tannopine will prove a serviceable remedy for arresting the excessive drain of fluids from the system, and restoring the mucous membrane to a healthy condition.

The History of the Massage Treatment.

It is often impossible to determine the origin of our methods of treatment, particularly as most of them date back to the dark ages, when accuracy in detail was not a characteristic feature in medical records. Sweden is usually credited with being the place of origin of the scientific system of massage and physical exercises. This, says the "British Medical Journal," is no doubt correct as far as modern Europe is concerned, but the real originators of massage and physical exercises appear to have been the Chinese. An interesting article appeared recently in the "Deutsche medicinische Wochenschrift" in which reference was made to a book lately published by P'an Wei, Governor of Hupeh. The author, a great authority on massage, was consulted by the late Empress of China. The Chinese legends contain many references to various systems of physical exercises, and these are associated in a curious manner with metaphysical thought. Life, according to the Chinese traditions, is entirely dependent on "air currents" which are designated as the primary *aura* of the organism. So long as the body is permeated by the "air current" it is proof against disease. The object of physical exercise is to circulate the "air current." The Chinese system is divided into three periods, each period occupying 100 days. The first period should commence at the time of the new moon. The patient must rise at 4 A. M. and walk outside his house, and take seven deep inspirations; immediately after this two youths, who have been specially trained, commence a gentle friction all over the body, starting over the cardiac area. At the time of full moon a further set of inspiratory exercises must be taken. Later on in the second period the various parts of the body are rubbed with wooden planks until the muscles are hardened. It is not until the hardening of the muscles takes place that the real physical exercises commence. Between the fifth and sixth month is the period of greatest activity; the European dumb-bell is replaced by large sacks filled with stones. In the third period the back muscles are chiefly exercised. Great benefit is said to have resulted from this system.

I consider Dioviburnia almost a specific in Uterine trouble. In threatened abortion it gives almost instant relief; has never failed me in a single case of Uterine Colic. In all cases of female Neurosis I combine Neurosine ʒ iv, Dioviburnia ʒ ij with the very best results. I shall continue their use in my practice. J. P. Carrington M.D.
Walker, Texas.

THE TREATMENT

OF

CHOLERAIC DIARRHŒA.

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ST. LOUIS.

1898.

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SOLE MANUFACTURERS OF LISTERINE.

Common-sense Doctors.

The Maryland Medical Journal, August 13th, 1898, contains the following "common-sense" editorial:

Many persons imagine that a knowledge of medicine is alone necessary for the successful physician, but experience has shown that the man with common-sense and knowledge of his branch united has the best chance of making a success. Books, even though there are too many of them published, are very helpful friends in time of need, but books alone are poor supports, and many a man would do better with his case if he would lay aside all his medical literature and use what innate sense nature has given him. Books are, as a rule, founded on a large experience, or, perhaps, copied in many instances, and the descriptions of a certain disease are general and made to fit a variety of that disease, so that they may lead one astray. Rarely does a disease follow the typical course laid down for it by the best text-books. Again, the clinical lecture or the medical journal article may be very comprehensive, but it too often contains the immature thoughts of an unobserving man and too often misleads.

The question asked in any disease is, "What is the matter with the patient?" The patient wants a disease with a name to it—a disease that can be catalogued. The book man gives the disease a name; the man with common sense will treat that disease to the best of his ability and withhold his diagnosis until he is sure of himself, and may even make none at all, preferring to cure his case with a nameless disease than to see it terminate fatally with a double-jointed name.

Cold Hands and Feet.

Cold feet are due to poor circulation which is either a direct result of weakness of the heart, together with bad hygiene of limbs, or else it is due to certain nervous conditions. The size of the blood-vessels, and hence the amount of blood in any part of the body, is under the control of the vaso-motor nerves, which are connected with the sympathetic system. When these are irritated, the blood-vessels will often be contracted and the supply of blood will diminished independent of local conditions. The sympathetic nerve centres are largely situated in the abdominal cavity, and then there is a disturbance of these organs that results in congestion of the sympathetic nerve, the individual frequently suffers from cold feet. Exercise which does not tend to better the condition of the nerve, will not relieve the coldness of the extremities. The only thing that can be done to correct the condition is to correct the state of the nerve, which must be done by proper diet and treatment. If the tronble arises from prolapse of the abdominal organs, it may be accomplished by having them properly supported. This will often give marked relief.

Blennostasine in Hay Fever.

The drying effect of Blennostasine is most remarkable, and renders it of great value in the treatment of hay fever. Many remedies may benefit this affection, but the most uniform and decided results are obtained from the use of Blennostasine. Its influence on the vaso-motor system is in many cases remarkable. It produces a dryness of the naso-pharyngeal membrane almost equal to the effect of belladonna, and has the additional advantages of being non-toxic. When possible, treatment should be commenced ten days before the usual date of an attack, with five grain doses of Bennostasine three times a day. On the day preceding the usual date of attack, twenty grains should be administered, and the dose increased ten grains daily until the symptoms are controlled. If the attack does not appear or is controlled, the dose should be gradually diminished. If the patient is not seen until the attack has begun, full doses (five grains) of Bennostasine should be given and increased as required.

The Best and the Cheapest.

In prescribing either medicine or nutriment, a physician most often considers the question of what is the most economical as well as what is the best for his patient. And it is only occasionally that he is made happy by the knowledge that the cheapest is the best. He always knows that "the best is the cheapest," but this helps him very little if economy must be thought of.

John Carle & Sons point with pride to the fact that their prepared food, Imperial Granum, is the most economical as well as the best food on the market, and in proof of this, they ask physicians to carefully note the weight of their handsome "Small" and "Largs" size air-tight tins, and also to kindly notice the length of time one will last, bearing in mind that their sterilized tins form the lightest, as well as the safest retainer that can be used.

Sanmetto, Listerine and Chloroform.

Three great blessings to suffering humanity. Sanmetto and Listerine being as great as Chloroform. H. Drennan, M. D.

Verdery, S. C.

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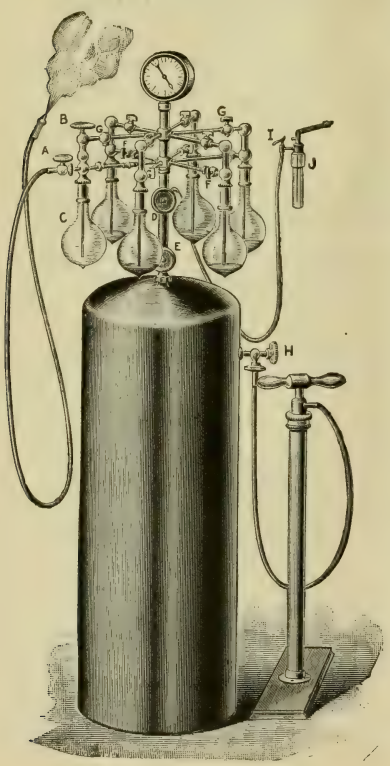

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The Surgical Treatment of Pelvic Inflammation.

Dr. Cullingworth, of London, at the recent meeting of the British Medical Association held in Edinburgh, discussed the following points: (1) The indications for operative interference in pelvic inflammation; and (2) the choice of time for operation. Under the first head he first spoke of pelvic cellulitis. If unattended by suppuration no interference is necessary; when an abscess has formed, the pus should be evacuated as soon as it is discovered and is within reach. The indications in pelvic peritonitis cannot be stated so categorically. The personal experience of the speaker has led him to regard the following signs and symptoms as being strongly suggestive of the need for operative interference: (*a*) The presence of a definite, more or less fixed, irregular swelliug in one or both posterior fossæ of the pelvis, larger than could be accounted for by a thickened tube matted together with a normal ovary. If this increases in size in spite of local treatment, the suspicion of pus gives way to certainty. (*b*) The occurrence, during an attack of acute inflammation of the uterine appendages, of a tense, globular, cystic mass in the pouch of Douglas. (*c*) The outbreak of recurrent attacks of pelvic peritonitis in a patient known to have had an acute salpingitis, in whom there has remained a quiescent but obvious swelling in the posterior part of the pelvis. (*d*) The sudden appearance of symptoms of general septic infection in a patient with a more or less definite history of pelvic inflammation and a localized swelling above the vaginal roof. Such cases urgently need surgical intervention. In non-suppurative inflammation interference is indicated if there be reason to fear complications or if the circumstances of the patient are such that it is necessary to restore her to health quickly.

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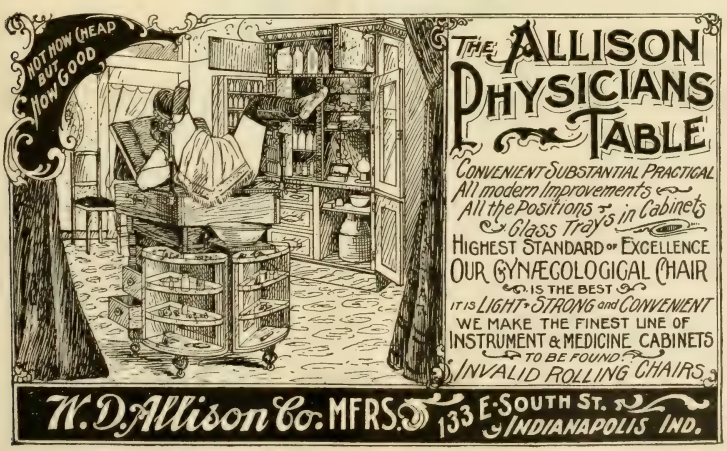
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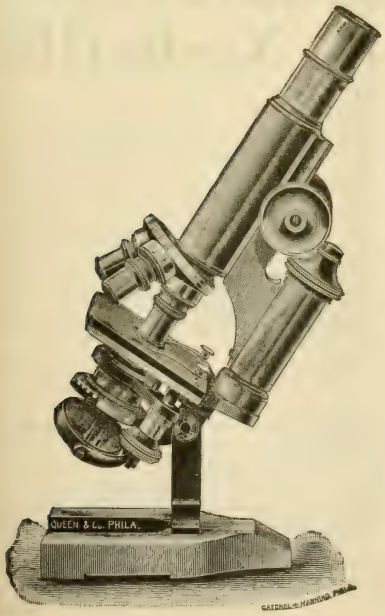

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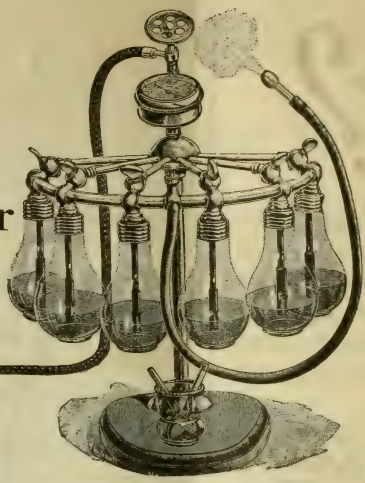

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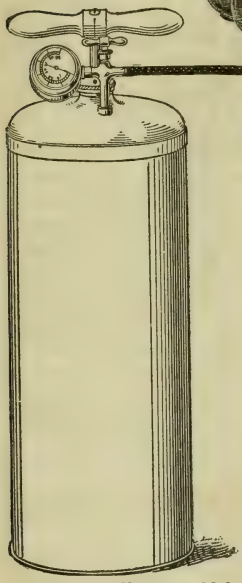

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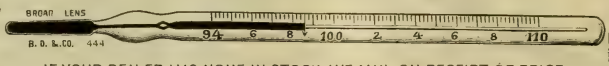

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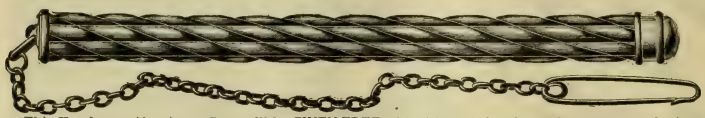

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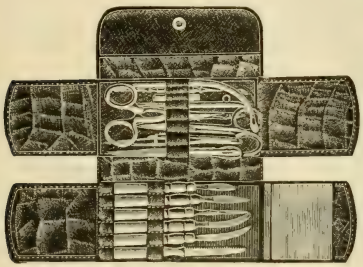

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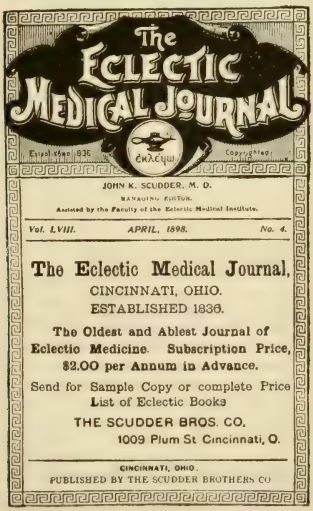
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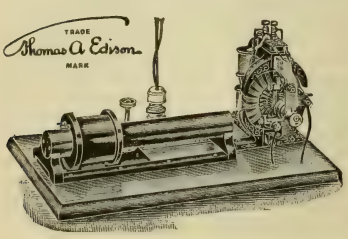

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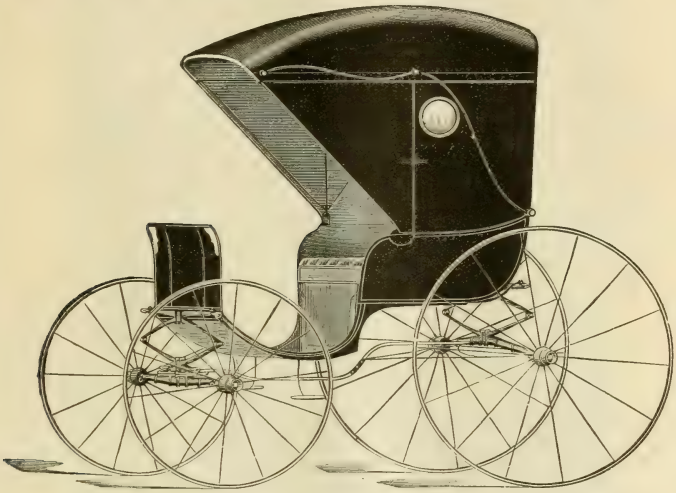

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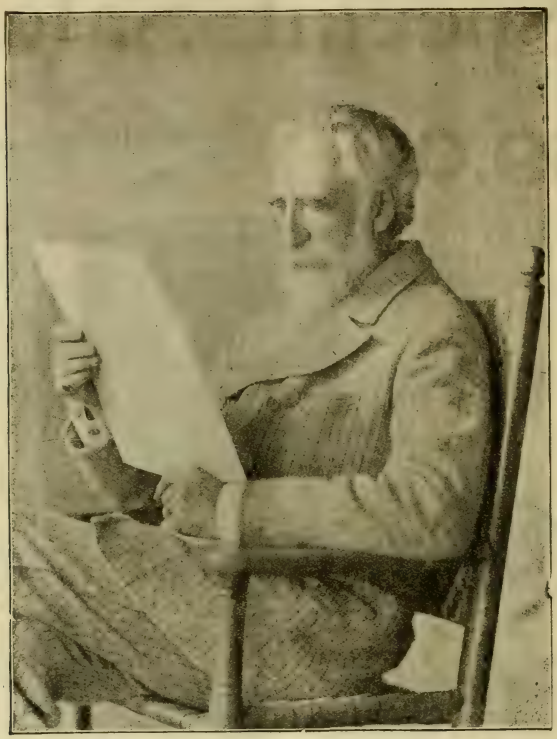

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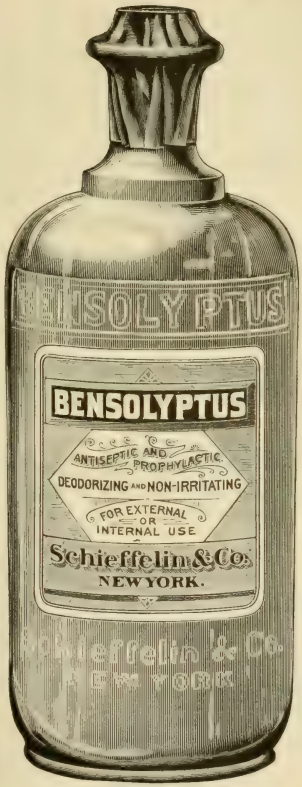

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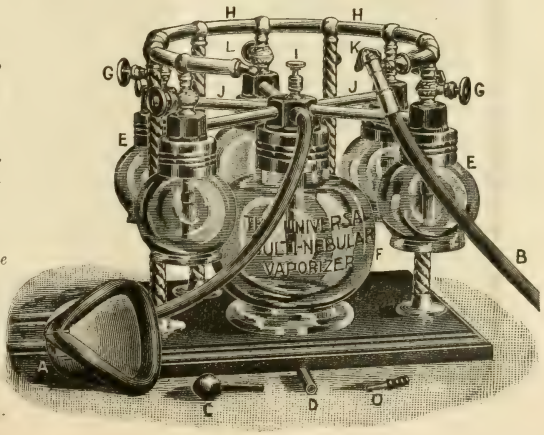

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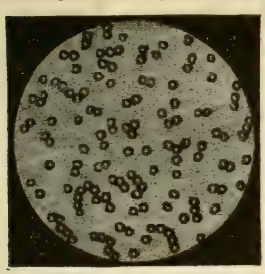

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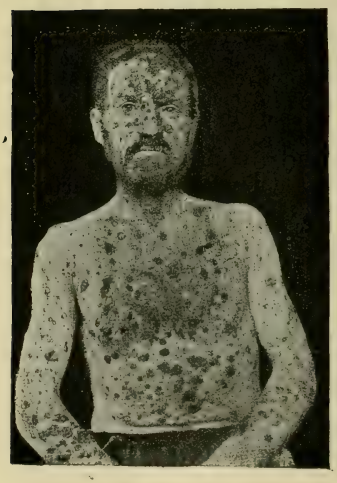

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Fig. XVII—Dorsal Position.

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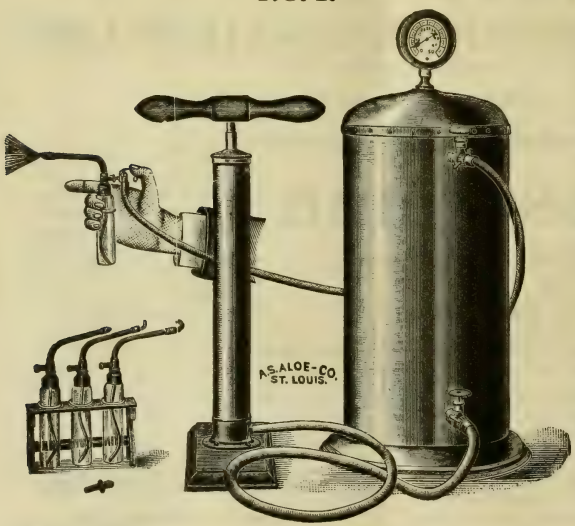

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The Charlotte Medical Journal.

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The New York State Cancer Laboratory at Buffalo.

By Roswell Park, A. M., M. D., Director, Professor of Surgery, Medical Department, University of Buffalo.

The State of New York has taken the initiative in the matter of the very greatest importance to the medical profession throughout the world. It has appropriated a generous sum of money, which will undoubtedly be repeated each year, for the "Equipment and maintenance of a laboratory to be devoted to an investigation into the causes, mortality-rate and treatment of Cancer." This money was appropriated directly to the Medical Faculty of the University of Buffalo, N. Y. As will appear from statistics which I have elsewhere published, and which can be verified from the public health returns, Buffalo is practically the geographical centre of a considerable area, say some 200 miles in radius, where the death-rate from cancer is greater than in any other part of the country. So conspicuous is this fact that I have often stated that it is really we who live in the 'tropic of Cancer.' It was the frightful prevalence of this disease, coupled with a full realization of the difficulties of the subject, which actuated me in endeavoring to secure State aid for the purpose of studying it. After two years of no small effort and toil I succeeded in not only securing the passage of this measure through the Legislature of our State, but also in getting the signature of the Governor. The money was voted, as above stated, to the University of Buffalo in order that the laboratory may be kept absolutely out of politics, and under the influence of scientific men, who alone are competent to cope with such subjects. As thus organized, it becomes the first institution of its kind in the world, and bids fair to accomplish a work of the greatest importance and usefulness. The laboratory is operated partly in the college, partly in the buildings of the Buffalo General Hospital, and there exists between these institutions and it the most cordial relation, and the greatest opportunity for utilization of the large amount of clinical material furnished by the hospital.

In a paper in the American Journal of the Medical Sciences, in May, 1898, I set forth at some length certain lines of study along which it would be necessary to carry this investigation. In that paper also will be found a short presentation of the principal arguments in favor of the parasitic theory of cancer, a theory to which I have more and more inclined, and which I think will soon be positively demonstrated. To the positive identification and recognition of these parasites the work of the laboratory will be largely confined, since the first step in the ultimately successful treatment of this disease must be a recognition of its causes. The other means of studying cancer, however, in its statistical and other relations, will be by no means neglected. It is intended that careful examination of all the excreta, as well as of the blood of cancer patients shall be made, in order to determine, if possible, whether by this means earlier diagnosis of suspicious cases may be arrived at. In other words, the disease is to be studied in all its aspects.

Cancer is the *bete noir* of not only the surgeon, but the entire profession. It has been studied by individuals since medical history began, and of late has occupied the attention of every pathologist of renown. Yet, strange to say, it has always been studied in a desultory kind of way, and the problem has never been attacked *ab initio*. Cancer is, after all, nothing but irregular and exuberant cell growth, most probably induced by parasites. Its highest expression is, of course, seen in man, but its lowest expression may be seen in the lower animals, or even in the vegetable kingdom, where a corresponding sort of neoplasm destroys many and many a stately tree. When we begin by studying it in man we attack the most difficult end of the problem first. It is our purpose in this institution to study it from all sides and not to neglect the so-called arboreal tumors.

One cannot feel satisfied with the inoculation experiments hitherto attempted. All this work must be gone over systematically and with the aid of the most recent methods. The same is true of the bacteriological study of the disease, since, if there be a parasite of the disease it must be capable of cultivation. The Italians have already done some excellent work in this direction, as repre-

sented in my paper above quoted, and we have within a short time in this laboratory been able to secure cultures from malignant growths. It remains, however, to be established whether these are accidental or are the real causes of the disease.

The field is an enormous one, has never been thoroughly worked and is at the same time most promising. Although this institution is generally spoken of as the Buffalo State Cancer Laboratory, its correct designation is the "N. Y. State Pathological Laboratory of the University of Buffalo." We are anxious to secure aid from all sources and invite correspondence to this effect. We are also particularly anxious to secure specimens of fresh tumors from the lower animals. Specimens of this kind should be put at once into pure alcohol and forwarded. The institution will gladly pay mail or express charges on any material of this kind which is so prepared and which arrives in such shape as to be available for study.

Our Recent Work with the X Ray.*

By SOUTHGATE LEIGH, M. D., in Collaboration with M. A. AGELASTO, Electrical Engineer, Norfolk, Va.

About three months after Roentgen's marvellous discovery was made known to the world, I began, in conjunction with Lieutenant Squier of the Artillery School, stationed at Fortress Monroe, some work with the X Ray. This was more than two years ago, and at that time the present fluoroscope had not been thought of, and there were only about six good vacuum tubes in the United States. One of these we borrowed from Dartmouth College, and conducted a series of experiments, examining many interesting cases. Our photographs were, however, still very imperfect as compared with the brilliant results now achieved.

The machine, exclusive of the tube, was put together at the Artillery School, and our experiments were conducted first at the St. Vincent's Hospital, Norfolk, and later at Fortress Monroe. No report was made of this work on account of its partially tentative nature. We were able to obtain fair photographs of the thinner parts of the body, such as the hand and forearm, and met, also, with two very interesting cases of what might be considered the therapeutical effects of the ray, which shall be brought to your attention later on in this report.

These experiments with the X Ray were, so far as I am able to ascertain, the first conducted in the United States, south of Baltimore.

A little over a year and a half ago, after the invention of Edison's Fluoroscope, the present writers combined to continue this work on a more extensive scale. We purchased the best machinery obtainable, and began a systematic work in diagnosing obscure cases.

The means used in producing the requisite electrical supply for the Crooke's tubes, in which the X Rays are generated, is the simple Induction Coil, named for Ruhmkorff, in which a number of turns of coarse wire are wrapped around a soft iron case and arranged in connection with a battery. The Ruhmkorf coil used for the X ray is simply a large duplicate of the small Ruhmkorf coil used for producing Faradic currents for medical purposes. As in the small Ruhmkorf coil the X ray coil has a primary circuit, a current interrupter, and a secondary circuit.

The primary consists of a few turns of wire of large diameter coil. The secondary consists of a larger number of turns of smaller diameter wire which is wound over the primary winding. The interrupter is an arrangement for intercepting the continuous flow of the battery, causing an intermittent flow through the primary winding, and thereby inducing a current in the secondary.

The dimensions of our X ray coil are about two feet in length by eight to twelve inches in diameter.

From the secondary of this large coil, where the primary is excited by a sufficient amount of current, a spark of about eight inches may be obtained.

In order to avoid the known disadvantages of electro-chemical batteries, the 110 volt, direct street circuit is used. The use of this current necessitates a more complicated interrupter than the one used for the simple battery current, and we use the Willyoung Sayer rotary break.

The secondary part of the apparatus consists of the Crooke's tube, which is a sealed glass bulb out of which almost all the air has been drawn, leaving a nearly perfect vacuum. Inserted into the glass bulb aer platinum wires leading into the interior of the bulb. To these platinum wires are joined the ends of the secondary wire of the large Ruhmkorf coil. The current is sent through the secondary into the tube by means of the platinum wires. The tube then emits a greenish-yellow light, associated with which there is an influence possessing the power of transpiercing appar-

*Read before the Seaboard Medical Association.

ently light-proof substances, a quality which has long since been proved to pertain to ultra-violet light, although not to so decided an extent.

The Fluoroscope is merely a card-board or wood screen coated on one side with a uniform layer of platinum-barium-cyanide. The coated side is protected by a light-proof sight-box with aperture for the operator's eyes, very much like a stereoscope. Now, when, for example, any part of the human trunk or limbs is placed between a properly excited focus tube and the Fluoroscope, it is possible, by looking into the latter, to see all the bones very clearly, and also to locate any foreign body of greater density than the surrounding substance.

When first experimenting with the instrument the terminals of the secondary were connected directly, according to the usual method, to the suitable terminals of the Crooke's tube. With this arrangement we found that a number of tubes, apparently in good condition, gave a great deal of trouble on account of unsteadiness and lack of due penetrative power. As an attempt to obviate this difficulty, an air gap, which could be varied as to its length, was introduced between the positive terminal of the machine and the anti-cathode of the tube. This was followed by decided improvement in the results. Tubes that, under the former arrangement, were about to be thrown away as useless, under these new conditions gave a penetrative ray with exceeding steadiness. The air-gap seems to require an exact and particular length for each tube, and unless this is ascertained the best result will not be obtained. It is interesting to notice that in certain tubes the anti-cathode platinum disk will not redden or become white with heat until this air-gap is of the right length. The joining of the anti-cathode of a variable condenser capable of regulation and connected with an adjustable air-gap would no doubt enable still better results to be obtained with even less exciting power.

The story of the discovery of the ray is almost too well known to bear repetition to-day. Both Faraday and Crooke had suggested a fourth state of matter, namely: a radiant state; one among other phenomena of this condition being that the molecules were to be as much further apart than in the gaseous state as the molecules in a gas are further apart than those of a liquid. Crooke further perceived by the high vacuum tubes, that the few electrified particles were projected in straight lines in what he called a "mean, free path," from the cathode. These molecules were so far apart as to admit of their moving in such direction without jostling one another, thus acquiring a very great velocity. One effect of this was a bombardment of the walls of the tube by the projected molecules and a consequent fluorescence of the glass. Hertz next showed that this cathodic ray would pass through thin sheets of metal, and Lenard later established the existence of the cathodic ray outside the bulb by experiments with a small, so-called, window of aluminium opposite the cathode. This now produced fluorescent effects outside. Lenard also noted the power of the cathodic ray to pierce what had been thought to be light-proof substances. It remained, therefore, for Roentgen to produce like effects at long distance from the tube, and to intensify the penetrative quality until it was possible to show the bones within the flesh.

The hypotheses as to the actual nature of the X ray are numerous. At first, Roentgen himself inclined to believe that it was a longitudinal wave in the ether, somewhat resembling a sound wave in its nature, Lenard very naturally emphasized the very close resemblance between the X ray and the cathodic ray, outside the vacuum tube. while the weight of authority now seems to lean toward the theory advanced first by a number of French scientists, namely: that the X ray is of the nature of light, a very black light measured some distance beyond the visible spectrum.

Thus, beginning with the appliances described above, the very best obtainable at the time, and adding to them from time to time as new devices appeared on the market, the work in the operating room became gradually more engrossing and effective.

The first fluoroscope showed the thinner parts of the body perfectly, but would allow of no examination of the internal organs of the trunk. Most of the bones could be distinguished, although at the time it required patience and perseverance.

One of the earlier and more interesting experiments was made upon the chief of a city department, who had been shot in the upper fourth of the thigh by a thirty-two calibre bullet. The limb was very thick and offered much resistance to the passage of the ray. After an hour and a half of patient search, despite the fact that the whole length of the shaft of the femur could be made out, it seemed that the matter would have to be given up, when a slight elevation on the surface of the bone became visible. The spot was marked, and the subsequent successful operation explained the difficulty. The bullet had struck the bone and been mashed thin and flat against it. This was a triumph for the ray, as the obstruction to the light, caused by so thin a

piece of metal, was necessarily very slight.

In April, 1896, the liver appeared, though somewhat imperfectly, in a photograph. In August a new fluoroscope arrived, and on searching for a bullet in the chest, one day, there suddenly appeared to the delighted vision the shadow of something expanding and contracting at regular intervals, and this proved to be the heart. The liver appeared at the same time, and with it a vivid realization of what an extensive excursion this organ makes with each respiration. The kidneys were discovered later.

Every part of the human frame is now translucent to this wonderful unknown ray, and we can distinguish the outlines of all those internal parts which offer a greater resistance to the light and throw a deeper shadow than their surroundings.

We have examined in all about four hundred cases; many with negative results. These examinations include every part of the body, from a thumb in which a needle was lost, to the spinal column, for diagnosis of a curvature. Lack of time prevented our work from being as systematic as the subject deserved, and some of the more interesting cases were not photographed.

There have been applications for examination by the X ray from various sections of the country, from people with all manner of diseases; many, of course, absolutely unsuitable for its use. The general public is impressed with the idea that the ray is capable of showing the condition of every organ of the body, and also of demonstating the mysteries of numerous functional diseases. We have had to examine several patients for imaginary tumors, who would not be satisfied with the ordinary methods of physical exploration. One gentleman assured us that he had been suffering with his abdomen for years, and felt certain that "something was broke loose inside of him."

So far our best results have been in connection with *bone surgery*, the ray being of invaluable assistance both in the diagnosing and also in aiding the treatment of fractures, dislocations and sprains, as well as deformities and diseases of the bones.

Our *fracture cases* have included most of the bones of the human anatomy. Only after using the X ray can one adequately realize what a tremendous aid it can be in showing the exact condition and position of the break, especially when swelling interferes with proper palpation of the part.

Our method of procedure has been to examine the break with the ray first, then set it, and examine again in order to see if the bones are held well together. Ordinary bandages, starch bandages and wooden or pasteboard splints offer but little obstruction to the light. I have watched my cases from time to time, not only to be sure of no bad results, but also to note the formation of the callus. It is sometimes two weeks before this new tissue gets dense enough to obstruct the ray sufficiently to be visible, and it takes two or more months for it to appear the same as the rest of the bone tissue.

Examination of a number of cases of old fracture shows up many defects in the setting of bones which otherwise would not be apparent. One case, in particular, illustrates this point. Before I had my machine I attended a case of fracture of the tibia, caused by a log rolling over the leg. I treated the case in the ordinary way and the man recovered, but for two months afterwards he complained of unusual pain and soreness in the leg on walking. Digital examination revealed nothing. About this time I purchased an X ray outfit, and on examining the leg found a long, sharp splinter of bone which lacerated the muscles when the man walked.

Among the simple fractures examined I may mention several cases of Colles's fracture, fracture of hand, foot, leg, thigh and ribs.

A recent interesting case was a fracture of the elbow, in which the tip of the olecranon and a small piece of the external condyle were chipped off. The ray was, in this case, invaluable, enabling one to get a perfect view and to restore the joint to its original usefulness. Compound fractures have been especially interesting in showing the healing of the bones. In a number of these cases I have brought the bones together with silver wire, which shows up clearly with the fluoroscope as well as in the photographs.

One case of excision of the elbow is interesting as showing the healing of the bones after the formation of an artificial joint. In one case of this sort the joint was so useful that the patient's friends, many of them, believed him to have had inserted a joint of gold!

Various kinds of *new growths* are among the most interesting cases; one was an osteo-sarcoma of the fibula.

An interesting photograph in my collection is one of the hand and forearm of a veteran of the late war, who had a considerable portion of the bone torn away by a shell. His hand was saved only after the most persistent and long-continued treatment, and the X ray showed the peculiar way in which the bones united.

Our cases of *dislocation* have not been so numerous as the fractures, but quite as satisfactory. They include nearly all the

usual joints, wrist, elbow, shoulder, clavicle, hip, knee, etc.

One case was sent me by doctors who, upon first seeing it, were unable to make a diagnosis on account of the extreme swelling. The ray cleared up the matter in a few minutes. It was a case of backward dislocation of the elbow joint. Another one of my photographs shows a backward dislocation of the knee, produced by contraction of tendons following tubercular abscess of the joint some years before. The bones had become so roughened at their ends, and so fixed in their bad position, that it was necessary to do an excision of the joint. The patient has recovered, and now has a useful limb.

The ray has helped us with *sprains*, in showing the amount of abnormal mobility permitted by the injured ligaments. Especially in traumatic flat foot has it given aid both in diagnosis and treatment.

We have had so many cases of *supposed sprains* which turned out to be fractures, that I am convinced these small breaks have been very generally overlooked. The practical advantage of demonstrating the existence of such a fracture is to prevent too early use of the injured part, which might result in permanent harm. A good illustration of this point is furnished by a patient who came to me recently with a history of an injury to the ankle seven months before, and her physician wrote that he first saw her twenty-four hours after the accident, at which time the parts were greatly swollen. He could make out no fracture, and treated her for a sprain. During the next seven months she made constant but unsuccessful efforts to walk. The X ray disclosed the fact of an old fracture of the tibia which had united but had probably taken a long time to heal, on account of the parts not being immobilized. During that time the foot became fixed in a bad position and rendered all efforts at walking very painful. Vigorous treatment by massage, electricity, etc., has completely cured her in a comparatively short time. I have had several other similar cases.

Recently I was called to a steam yacht in the harbor, and found a young man suffering pain in his ankle, which he had twisted the night before while romping on the boat. I examined him carefully and felt sure there was only a sprain, but subsequent exposure to the ray proved, to my surprise, that there was a crack of the fibula near the lower end, which was not deep enough to cause the slightest sign of a deformity. The patient was a heavy man, and, but for the X ray examination and the consequent immobilization of the joint, I feel sure that he would have had serious trouble.

The locating of *foreign bodies* in the tissues is also one of the more interesting functions of the X ray work. Our cases in this line include the finding of pieces of glass, wood, metal, needles, etc. I have a photograph showing a pin in the thumb which is of interest because the pin was so completely lost that an operative search was abandoned. After locating it with the ray, I found it to have pierced the bone and broken off in its substance.

Bullet cases have been particularly numerous. The missile can usually be seen at a glance, and we have adopted the following simple method of marking its location: The part of the body containing the bullet is put in a given position and the bullet brought into view; the entrance and exit of the ray is located on the skin by holding the end of an applicator handle in the line of vision, first on one side and then on the other, and marking the points with an indelible pencil. The position of the part is then shifted and the same process repeated. This gives us four marks on the skin, and the bullet will be found at the point of intersection of the lines joining the marks.

Probing for a bullet is both dangerous and unsatisfactory, as, on the one hand, infection may be carried, and, on the other, there is a possibility of diverting the instrument in the wrong direction, on account of the deep layers of connective tissue. I should like to see the old method abandoned altogether, as a relic of barbarism, the examination by the X ray completely supplanting its use.

In my first bullet case, the ball had entered the thigh near the hip joint, and had remained lost nine months, causing irritation most of the time, though not enough to enable me to find it. It was located by the ray just above the knee joint. My last case, now in the hospital, was one of a man shot with a flobert bullet, the missile passing between the floor of the popliteal space and the blood vessels, and being found on the other side of the joint. Two cases of bullet in the leg were most interesting on account of the upward course pursued by the bullet. One man was walking, the other was running, when shot from behind and, curiously enough, the bullet evidently struck the skin when the foot was elevated.

A litttle boy with a bullet in the lower end of the tibia informed us that while playing with a supposed unloaded pistol, a fly lit on his knee. He took aim at it, fired, missed the fly but sent a bullet down to the

cartilage of the joint. I was able to remove it without seriously disturbing the joint.

A bullet embedded in the deep muscles of the neck was easily located, and is yet to be removed.

A few months since, in making a life insurance examination, the applicant informed me that he had been shot in the axilla several years before, the bullet penetrating into the chest and being lost. On careful examination with the ray, I located it, close to the sternum, where, in case of any future trouble, it could be readily accessible. He would have been rejected but for this discovery.

One of our photographs shows plainly a bullet which entered at the heel, and was found in the sole of the foot near the toes. The largest bullet I have extracted was a 44, which pierced the middle of the sternum, passed downward and outward through the right lung and embedded itself in the chest wall, where I located it. The patient was in a most desperate condition for more than a week, but recovered completely.

A most satisfactory case was that of a heavily built, thickly set man who was shot in the back of the neck. The ball passed forward, grazing the deep blood-vessels of the neck, struck the lower jaw, breaking it badly, and was located in the muscles of the face. The markings were rather difficult to make, but the operation showed the bullet to be exactly indicated. In one direction the ray had to penetrate from the front of the face to the back of the neck, and in the other direction through the face from one side to the other. The bullet could be distinctly seen by aid of the fluoroscope.

A similar case was that of a little girl whose brother shot her in the face with a buckshot from an air-rifle. The missile went into the face deeply. The ray showed it distinctly, notwithstanding its small size and the obstruction to the light from the surrounding tissues. It was easily removed.

We have had one case of bullet in the brain, which we found to be just back of the orbit, that we did not think it safe to remove. The X ray will penetrate any part of the head, but here, as elsewhere, it shows the outlines of those substances only which are denser than their surroundings.

In examining the *heart* we have been able discern variations in size, shape and position. We have also watched its action, and noted regularity or irregularity of contraction and expansion. The sternum and spinal column both interfere to some extent with a complete view of this important organ,

The *liver* proves the most satisfactory of all the internal organs, to examine. We are able to make out its entire outline, including both of the lobes, and to judge somewhat of differences in density. I have seen the solidified *lung* in tubercular cases, but the healthy organ seems to be too porous to show. Of late we have made out the *kidneys*, but with difficulty, on account of the spine and pelvic bones. The thickened wall of the *stomach* we have seen in two cases only. The other organs have remained invisible, so far.

In regard to the *therapeutic effect* of the Roentgen Ray, I may mention a few cases without expressing any opinion likely to conflict with higher and more learned authorities.

In the early part of our work one of the first cases examined was a young man with a bullet in the thigh. At that time his knee was very much swollen, exquisitely tender and painful. He could not bear the slightest touch or motion without crying out in agony. It was with the greatest difficulty that he could be properly nursed. I feared suppurative arthritis. In those days the machine was of much less strength than at present, and in order to get a photograph of the part his knee was exposed to the ray for four hours continuously. The next day I was surprised to see the patient moving about the bed without pain; the second day he was up in a chair, and the third day he was walking around on crutches!

A month or two later I was consulted by a naval officer about his son's elbow, which was affected with tuberculosis, and was so much inflamed that no less an authority than Prof. Wyeth had advised excision. The father consulted the great electrician, Nicolai Tesla, who advised a trial of the X ray. Acting upon this advice we exposed the joint to the ray two or three times a week for two hours each time, until the total exposure was about twelve hours. After each exposure I applied a wet dressing. In a short time all signs of inflammation had disappeared, and now nearly eighteen months have passed without any return of the disease.

About eight months ago a colleague brought me a case to examine for gallstones. For several months the patient had been suffering frightful attacks of pain at frequent intervals. I made a prolonged examination with the ray, without finding any stones. They may have been present and have escaped detection on account of their small size. Strange to relate, however, the man has never had an attack since the examination, and is entirely restored to good health. Two other cases of a similar nature were apparently relieved by the use of the ray.

I make no comment upon these cases, but leave you to draw your own conclusions.

So much has been said in the past few months about the bad effects of the ray that I cannot close this paper without referring to the subject.

There has been absolutely no irritating effect from the ray in any of my cases with two exceptions. The first was the case of tuberculosis of the elbow referred to above. In this case there was a spot of discoloration of the skin, with no sign of inflammation, which disappeared without treatment, in about a week. The other was a boy who had a badly united fracture of the femur. Some difficulty was experienced in getting a good photograph of the limb. Several exposures were made. Two weeks later a dermatitis developed, confined to the surface of the skin and resembling an eczema. It was rather obstinate in healing, but after a few weeks of simple treatment was cured without any bad results.

I have used the ray in a large number of cases of all kinds. I have myself been exposed to it for hours at a time. From my intimate experience with it I can state most positively that if properly and rationally employed, *there can be not the slightest bad after effects.*

I fully realize that this report is an imperfect and incomplete one, but it has the practical advantage of being drawn entirely from personal observation, and I trust that it may be of some interest and use to the profession. I am convinced that, notwithstanding the great good already obtained from the X ray, there yet remains a broad field for further development. Improvements in the perfecting of the machine are being so rapidly made that in the next few months we shall probably learn many new facts in connection with diseased organs. I hope also for decided results in the treatment of diseases.

The unknown ray has already proved itself to be a marvellous discovery, and for the future I doubt not that its influence for good will be extended even beyond our most sanguine expectations.

Cerebro-Spinal Meningitis Treated Successfully without Narcotics.

By JOHN C. MCCANDLESS, M. D., Chicago, Illinois.

As this disease has been receiving considerable attention of late, and with an increased number of cases in this part of the country, I offer the results of my experience in a line of treatment practically original to the majority of physicians.

I do not believe that the disease is infectious although a septic condition exists in every case. Atmospheric conditions evidently have to do with its development although sporadic cases may develop from other unfavorable influences. It appears most frequently as epidemic. Malignant purpuric fever, petechial fever and spotted fever, are common names and misnomers also. The itis is excited by injury to or poisoning of the membrane. A septic condition accompanies and probably precedes the disease. Children and adults are alike subject to it. Osler says, "over exertion, prolonged marching in the heat, depressing mental or bodily surroundings, and the misery and squalor of the large tenement houses in cities are predisposing causes."

A recent case of mine developed in conjunction with disordered stomach and bowels, brought about by the use of ice cream and "green watermelon" in a married lady of about 45 years of age. Bacilli are no doubt associated with this disease as with all other septic conditions, but are not the cause of it, as the virus is not necessarily specific. The morbid anatomy will differ as the disease progresses. First the membrane is affected either from poisoning or injury and is immediately followed by inflammation, which produces intense pain. Photophobia is especially marked. The skin over seat of disease is in some cases exceedingly sensitive. The application of a liniment with a feather or camel's hair brush will produce pain. The clinical history of patients treated with opiates from inception of disease will probably differ from above history somewhat as more waste and poisonous matter will be retained under narcotic influence. Without the use of morphine and similar agents the skin is easily acted upon especially during the inflammatory period. Half a drachm of F. EX asclepius tuberosa with the addition of five minims of lobelia will be sufficient to produce free perspiration. By this means we open up excretory channels to increased effort and combat in a measure the influence of retained waste and poisonous matter.

The intense pain demands vigorous measures and careful application, Regardless of this we must not lose sight of the conditions, as the area of disease will be extended if we direct our agents to symptoms. Therefore we should meet the conditions rather than symptoms. Symptoms are valuable guides to the physician; they are nature's signals indicating the extent of the danger.

During the inflammatory period the sense

of hearing is very acute and words indistinctly heard by normal hearing will be perfectly audible to patient. The fact that hearing is intensified is against the theory of inflammation being destructive. I, of course, agree with Recklinghausen that in the inflammatory process proper we have an excess of arterial blood, and when we don't have arterial blood in excess we must cease to associate inflammation with inflammare. Patient should be kept as far removed from all noise and jarring sounds as possible.

The onset of the disease is generally sudden although in some cases it apparently develops as a complication of some other systemic derangement, preferably the septic class. The urine is generally scanty and high-colored during the whole course of the disease; also the tongue is coated and, as a rule, accomdanied with an offensive taste. If the stomach be disordered at first it is advisable to resort to lavage or the emetic; as a septic condition of stomach and bowels will be most speedily reached and benefitted by this method, and will become a temporary excretory channel. I have used the following throughout the inflammatory stage:

F.EX Lobelia Inflata	drachms	III.
" Cimicifuga	"	I.
Tincture Myrrh	"	½
Aqua Fervens	ounces	6

Mix direct. Teaspoonful or more every fifteen minutes. If the skin over the affected area be very sensitive to touch I apply F.EX lobelia to surface and have been very well pleased with results.

Five years ago I treated a typical case of cerebro-spinal meningitis in a boy of five years. Tension and tenderness was severe over the whole affected area, and not only was this tension and tenderness relieved by local application of F.EX lobelia, but the influence of this agent applied in this way seemed to give a large measure of relief from suffering generally. The direct relaxation of tissues and blood vessels by the lobelia relieves pressure of the nerves when applied for this condition. Lobelia is a most powerful relaxant, and there is nothing in all God's fair creation that I know of to relieve the tension and pain accompanying inflammation as effectually as this agent. Nerve sensibility may be suspended by the use of opiates but the retention of excreta under its use is very undesirable in all septic diseases. The fact that the blood vessels of the abdomen alone will contain many times the amount of blood of the whole body is a forcible reminder that the abnormal amount of blood contained in a local inflammatory process may be physiologically entertained elsewhere. But objection will be raised to the use of relaxants in septic conditions because of facilitating the spread of septic matter by relaxed tissue. In answer to this the objection is overcome by the combining an antiseptic with the relaxant. I prefer the myrrh in combination for this purpose.

Special attention of late years has been called to the antiseptic properties of healthy blood serum, and healthy tissue is not the habitat for septic germs. The bulwarks of healthy tissue does not consist of toxic properties to germs, but rather does not afford pabulum essential to their development and existence; and so long as tissues are properly controlled by the life force—manifested in bioplasm—tissues cannot putrefy. The conservation of this force and physiological function is essential to the successful treatment of every patient, and where the seat of disease approximates aud partly involves vital structures this principle is especially applicable. Assuming then that the acute stage is past, the foregoing treatment will not be followed by complications, and we are now concerned about the stage of depression. Nature excited and somewhat exhausted with extraordinary effort manifested during the acute attack is now in danger of congestion. The vaso-constrictor nerve function is necessarily impaired, as is the nervous system generally, and the tendency is to congestion in the affected area, owing to a slowing up of the blood current and a probable temporary enlargement of the lumen of the vessels. Morbid anatomy confirms this view. The vaso-dilators are no doubt also impaired, but the nerve debility consequent upon the conditions will add to the relaxation of the vessels. This is favorable to congestion, and congestion implies an accumulation, and stagnation.

We have now arrived at the most critical period of the disease when nature is flagging as a result of over-exertion. Shall we use irritants, or stimulants and tonics? Depression follows the use of alcohol and it does not act in harmony with or conserve the life force; and its direct or indirect effects never tend to a normal pulse. Alcohol is a fair representative of the irritant class of drugs, so we will dismiss the irritants. The heart is flagging, we will apply a heart stimulant—capsicum; and we find that the pulse inclines toward the normal in frequency and volume—quantity; and as the nervous system has been quite seriously involved judging from the lessons taught by morbid anatomy, and inferences drawn from the condition of the urine, a

nerve tonic and antiseptic is indicated. For the stage of depression just described I use the following or some slight modification of it:

℞ F. EX. Scutallaria.....drachms 3
F. EX. Capsici.....drachms 1
F. EX. Myrrh.....drachms 1
Syr. Simp. Qs. Ad.....ounces 3
Mix. Direct. Teaspoonful every hour or oftener.

The acute stage will last with the treatment described in the first part of this paper for about eight or nine days as a rule. For the scanty, high colored urine, I prescribe aqua fervens, and when the skin is not active I add a few drops of asclepius to the hot water during the acute stage. Complications are met as soon as they appear. Bowels should be kept regular with citrate of magnesia or some simple cathartic. If the liver ceases to act or is sluggish a stimulating chologogue is indicated. I use for this F. EX. Euonymus in half drachm doses. This agent is being quite extensively used of late years, and combined with cascara sagrada we have a most efficient remedy for moving liver and bowels.

Hoping to hear from the experience of others, who are specially interested in the treatment of this form of disease, through the Charlotte Medical Journal.

5636 Ingleside Avenue.

The Influence of the Physician.*

By Wm. Lane Lowder, B. S., M. D., Author of "A Pilgrimage; or the Sunshine and Shadows of the Physician," Humphrey, Kentucky.

There is not in all this broad land of ours, a hamlet or a home, in which the physician is not the most important visitor that crosses its threshold. He stands "upon the confines of existence, welcoming the new comer, and bidding farewell to the goer-away."

He has stood at the bedside, when the cry of the new-born broke the silence of the darkened chamber; he has cheered the lonely sufferer by his presence in the dark hours of sickness and gloom; he has stood by loved ones, when the poisoned darts of the "insatiate archer" marked them for his own, and lingered longest when human skill availed not and death came. The Hon. Thos. F. Bayard, in an address to a medical class, not long since, made the following remarks:

"I never knew a really great physician, who was not greater as a man—I mean whose greatness did not rest upon his personal and moral basis, which elevated and strengthened his professional life, infused itself into the community in which he lived, and was, in fact, the underlying and pervading cause of his influence and consequent success in his profession. It has been my personal fortune to know such a man. It has been my privilege and delight to accompany him in visits where his only medicines were the personal presence and conversation of the man himself. He had shared and lessened their anxieties; counseled the wayward; had led the sick back to health; cheered the weak-hearted; had rejoiced with them that did rejoice and wept with them that wept. And I have seen such a man so surrounded by an atmosphere of love and trust, holding as it were the heartstrings of a family in his hands, their guide, philosopher and friend, and then I realized what a moral force in society the profession, properly comprehended and properly followed, was capable of exerting, and how relatively small a part of its usefulness was the administration of medicine."

The physician should be a man of education, of polished and refined manners to the fullest extent. His profession should make him such, and the practice of that profession should make him a man of broad ideas. He is like the man who views the landscape from a broad eminence.

The mainsprings of human conduct are not concealed from his view. He becomes familiar with the interplay of those forces that control human action. He, therefore, should be a man not liable to be moved by prejudice or bigotry—two most baneful characteristics of a narrow mind. He should be keenly alive to the advancement of science. From his peculiar relations to people, he must be a man who wields an influence, the importance and force of which will be largely proportional to his breadth of information and his tact. Crises will arise in every community where society will turn, in its helplessness, to him who knows. Let the physician be ever ready to respond. Let the call find him qualified with that knowledge which will give him power. Through his influence the physician becomes a leader in society, molding its opinions, removing its prejudices, directing its energies toward those humane ends that will elevate and advance his fellow-beings.

"The web of human life is wove,
Not with a single strand,
But every grand and noble man
Holds one within his hand."

*An Address delivered before the South-Eastern Kentucky Medical Society at Williamsburg, Kentucky.

The word influence is the most incomprehensible, the most vast and far reaching of all words. We seldom use it in any but a literal sense, but in every degree of its true meaning there is the shadow of infinity. Philosophers tell us, not in jest, but in the profoundest earnest, that every footfall on the pavement jars the sun, and every pebble dropped into the ocean moves the continents with vibrations that never cease. The hand gives motion to a pendulum, and by that act an effect has been produced, which shall endure through eternity. The vibration of the pendulum as a mass ceases, but only because its motion has been transformed from mass motion to molecular motion. Had it been suspended in a vacuum and been made to swing without friction at the point of suspension, it would have vibrated on forever, but the friction which is inevitable, and the resistance of the air gradually bring it to rest, and we say the motion has ceased, but this is not true. The motion has only become invisible. A moment ago the pendulum was swinging, but now infinitely small atoms are swinging in its stead, and the aggregate motion of all those atoms is just equal to the motion of the pendulum at first. These waves of atomic motion expand and radiate from points of origin, extending on, and on, and on, past planets and stars, beating and dashing against their brazen bosoms as the waves of the ocean beat the rocky shore. This is not the language of fancy; it is the veritable philosophy, the demonstrated facts of science.

The mind gave birth to motion communicated along the nerve of the arm to the pendulum, and that motion has gone beyond its recall, on its eternal mission among the stars.

What a solemn thought! Man is the parent of the infinite! And yet this illustration but faintly shadows the awfulness of human influence. If a simple motion of the hand is fraught with eternal consequences, what shall we say of the influences of the mind? They shall live as long as the throne of the Infinite. Ah! that the mind of the physician could be impressed with the awful truth, that an influence in its very nature is eternal. Not a word, or thought, or deed, of all the myriad dead but lives to-day in the character of our words, and deeds, and thoughts. We are the outgrowth of all the past, the grand resultant of all the world's past forces. Only the Deity can measure the influence of a human thought.

"No stream from its source
Flows seaward, how lonely soever its course,
But what some land is gladdened. No star ever rose
And set without influence somewhere. Who knows
What earth needs from earth's lowest creature? No life
Can be pure in its purpose and strong in its strife
And all life not be purer and stronger thereby."

The physician knows that pathology is the ever-shadowing Nemesis of histology; that disease, health, pleasure, and pain go hand in hand; that it is but a step across the border line from sanity to insanity; that virtue and vice, law and anarchy, poverty and riches, touch elbows; that rust and decay go with inactivity, while growth and increase follow activity. Above all, he knows that environment is one of the most powerful of influences, and often the only one strong enough to overcome hereditary tendencies. All these and many other contending forces in the daily equation, lead the physician away from "Altruria," into the vision of society, the field of post-graduate activity.

There is nothing more evident than the law of compulsion. Everything is obliged to bend to it. Summer's heat and winter's storm are compulsion. Law, society, customs, and religion are compulsion. Commerce—so fittingly called the hymn of prosperity, the dirge of famine, vespers of the dark ages—is compulsion. There is no place where the individual is let alone. Everywhere influences of contending forces limit physiological as well as social life. The beautiful scenery of our country—the landscape of cultivated farms, villages, factories, rivers, and railroads stands for the collective compulsory labor of society. It represents community, its advancement represents civilization, and while it is all compulsion it is still thus beautiful, because of individual influences directing its development. The poet, Keats says:

"A thing of beauty is a joy forever;
Its loveliness increases; it will never
Pass into nothingness."

Let us see what place the physician has in this development, for he is one of three principal, positive, forming influences in society. He shares alike in this responsibility with the press and the pulpit. "The mantle of prophecy no longer descends on a successor, and the Divine purpose is not revealed to mortals." There exists, however, in every age, masterful classes of men, whose environments permit them to shape the destinies of society and direct its quiet, but powerful forces. In this silent, quiet work of directing forces, the two things necessary are always at hand in the physician's daily life, viz.: education and opportunity. He finds out early, in his daily

rounds, as one lately said: "It is not station, nor riches, nor power, but knowledge and wisdom and personal worth that most really and surely command the final homage of men."

By no author has this ever been so beautifully portrayed in story as by Ian MacLaren, a physician of the old school, in "Stories of the Bonny Briar Bush." The germinative influence of Dr. MacLure in "Dromtochty" has been a revelation to the reading world, who have all too little appreciated the influence of the physician in society. Ian MacLaren, in answer to a direct question at a banquet in his honor at Glasgow, stated that he had known four practitioners of medicine in Scotland, from any one of whom he could reproduce the character of Dr. MacLure, while, doubtless, we ourselves have known one or two physicians, from whom the same character could be drawn.

Such men lead the inner life of the community with them. The inspiration of their daily life to the boys and girls of their clientage and their words of advice are among the forming or incentive influences by which our schools and colleges are filled with students, and our country with useful men and women.

Dr. Chauncey Depew says that the physician, in his daily rounds, preaches, from a perambulating pulpit, lessons, principles, maxims, doctrines, proverbs, which, in time, form a large part of the ethics and virtue of his constituency.

> "Words of love from hearts sincere,
> In this world of care and woe.
> Are like springs in deserts drear,
> Giving life where'er they flow."

This quiet, every-day creative influence of the physician is a great factor in the development of great intellectual movements. Broad ideas are products of isolated germination, planted among the few who are able to grasp their meaning. They grow slowly, taking hold only here and there at first. These movements may be educational, or social, or revolutionary; but, whatever they are, they are discussed over and over again with the family physician, who tarries to talk awhile after his professional call is ended. He observes the birth of a broad idea in this way and disseminates it in his daily rounds among those whose minds are fit to seize it. After a time these ideas group, and the groups mass, then the public announces a common cause under some leader, who is competent to organize it and direct its purpose. In this way grand schemes originate and complex influences are directed to harmonious execution. This is the influence of contact, of line on line, and precept on precept, of day by day, and year by year, of close personal associations. It is a part of the physician's life and of his real field of usefulness, but is, by no means, the whole of it, for his influence extends to more extensive fields. Literature, poetry, fiction, war, history, science and discovery have all drawn distinguished followers from the ranks of medicine.

Apollo was the god of poetry, music, science and medicine. The Greeks, who were the closest observers of associated virtues, brought these attributes together as their ideal of what ought to be found in the make-up of a Greek physician. What an exponent of poetry and medicine our own Dr. Oliver Wendell Holmes has been. Dr. Holmes has been to the people of America what Robert Burns has been to the people of Scotland. His name has been a familiar one in scientific and literary circles for over sixty years; his fame and the recognition of his abilities increasing with the years, until at the close of his long life, it would be using no extravagance in speech to say that he was more widely known and more highly regarded than any other citizen of this country. He was truly a man of his day and age, a great observer of the affairs of life as to men and things—a philosopher in the broadest sense. If there was wisdom in Pope's couplet, as to the study of mankind, surely he had made it his own, as few have lived during his time, who knew men as well as he. His portraiture is so striking as to make his characters real as life to the reader, and well compare with the creations of the greatest novelists of the old world. As to his relative standing with the great poets and prose writers of his day—Longfellow, Whittier, Bryant, Lowell, Emerson and Hawthorne, of whom he was the last survivor, or as he says, "The last leaf upon the tree," there will always be a great difference of opinion with the critics, as with the common readers.

Nothing has escaped the touch of their poetic genius, from the dazzling jewel that glitters in the starry decked heavens, to the dusky pebble that paves the sunless caverns of the briny deep. They form a constellation of great minds in the galaxy of the world's literature, which marks a period in the history of literature in this country, and of which our nation may well be proud. Each had his points of excellence that emphasize his individuality and which will stand for his fame in the future. But taking him altogether, as scholar, poet, philosopher, prose writer, and metaphysician, Dr. Holmes is fully the peer of his great cotemporaries, whilst for versatility of genius and compass of powers, it would

be doing no injustice to say that he excels them all. The poets of the old world have given largely of the first fruits of their genius to royalty, kings and princes, however unworthy, have been their themes.

Our hero, like Burns, has made his offerings to the common thoughts and things of life, as fields and woods, and birds and flowers, and even the empty sea shell, any one of which, when transfigured by his poetic fire, glows like the burning bush of Moses in the desert, whilst some of his choicest gems of thought and his tenderest sympathies have been devoted to the obscure.

Hear him in a word for his silent sisters in humanity: "Nature is in earnest when she makes a woman, and there are women enough lying in the next churchyard, with very common blue slate stones at their heads, for whom it was just as true, as for Letitia Landom—she could give voice to her grief, they could not. Will you hear a word of mine?"

Then follows that sad song, "The Voiceless," that sad strain of such touching sweetness, that it has caught the ear of the civilized world, until they are no longer "The Voiceless," and the writer would have been known to everlasting fame had he never written another line. How applicable to himself was his birthday tribute and benediction to his dear friend Lowell, one stanza of which we give:

> "Strength to his hours of manly toil.
> Peace to his starlit dreams,
> Who loved alike the furrowed soil,
> The music haunted streams."

Not only will Oliver Wendell Holmes always occupy a unique position in the hearts and affections of medical men, for his long term of faithful service to the profession as a teacher of medicine, in which he labored so constantly to promote its interests, to increase its activities for usefulness, and to maintain its honor and its true standard of dignity, but also for the work he has performed in the fields of general science and of literature for the education, the elevation and refinement of the great masses who have come within the sphere of his influence.

While not in active practice of medicine all the time, yet Dr. Holmes retained for the greater part of his active life the most intimate connection with the profession, and as Professor of Anatomy at Harvard University, kept in touch with it for nearly forty years. In 1842 Dr. Holmes read a paper entitled "The Contagiousness of Puerperal Fever," before the Boston Society for Medical Improvement, in which he brought forward a long array of facts in support of the view that the disease was contagious, conveyed usually by the doctor or nurse, and due to specific infection. At the time there certainly was not an article in which the subject was presented in so logical and convincing a manner.

As Sidney Smith says: "It is not the man who first says a thing, but it is he, who says it so long, so loudly and so clearly, that he compels men to hear him—it is to him that the credit belongs;" and so far as this country is concerned, the credit of insisting upon the great practical truth of the contagiousness of puerperal fever belongs to Oliver Wendell Holmes. Fortunately, Dr. Holmes' medical essays are reprinted with his literary works. Several of them are enduring contributions to the questions with which they deal; all should be read carefully by every student of medicine. His essay on Homeopathy remains one of the most complete exposures of that farce—that therapeutic fad. There is no healthier or more stimulating writer to students and to young medical men.

With an entire absence of nonsense, with rare humor and unfailing kindness, and with that delicacy of feeling characteristic of a member of the Brahmin class, he has permanently enriched the literature of his race. In his "Poet at the Breakfast Table" he has embalmed the best part of his poetical nature. Versatile, stirring, witty, tender poems, that live with us and become a part of us, are "Old Ironsides," "The Chambered Nautilus," "The Wonderful One-horse Shay," "Rip Van Winkle, M. D.," "The Voiceless," "Bill and Joe" and "Under the Violets."

With a nervous vigor unusual to so delicate a frame, by strict obedience to the laws of health including abstinence from all the degrading excesses of his time, he passed with comparative comfort through more than three-fourths of a century and beyond sixty years of active labor devoted to his favorite intellectual pursuits, and to the cause of humanity. Like "The Last Leaf upon the Tree" he fell peacefully in the autumn, that he loved so well. Like his own wonderful "one-hoss shay," the end was a sudden break down. He has finished his work, and not soon shall his countrymen and the world "look upon his like again." His was a well rounded life, which has been aptly compared to the polished shell of his 'Chambered Nautilus.' With what tenderness and touching sweetness can we apply his own lines—"Under the Violets" to himself—

> "His hands are cold; his face is white:
> No more his pulses come and go;
> His eyes are shut to life and light;—

Fold the white vesture, snow on snow,
And lay him where the violets blow."

Stepping from the "white summit" of eighty-five years, he has passed into that realm of spirit life toward which he had long looked and wondered and to those celestial employments which await such souls as his in the Great Beyond. For the Great Architect of the Universe will

"When darkness gathers over all,
And the last tottering pillars fall,
Take the poor dust his mercy warms,
And mould it into heavenly forms!"

There are others, too, who took the oath of Hippocrates and sat in the temple of Æsculapius, whose influence and poetry live after them. So long as books are written, "Endymion" and "Lamia" will be read, and Dr. John Keats will live in the memory of men, while "Bitter Sweet" and its author Dr. J. G. Holland, will be studied and cherished by women whose hearts are wounded and feet weary. "The Hermit," "The Deserted Village," and "She Stoops to Conquer," will be read and praised throughout the grand aggregate of the cycles, and Oliver Goldsmith, notwithstanding his eccentricities, frailties and shortcomings, a welcome and an abiding place, will ever have in the chambers of thought. The poetry of Marchelli, Haller, and Erasmus Darwin is a part of the standard literature of the tongue in which they wrote. Mathematics has drawn eminent disciples from the ranks of medicine; and the name of Joseph Ray, M. D., and his series of text-books are as household words throughout the Union. The first Grammar of the English language placed in our puerile hands was written by T. S. Pinneo, A. M., M. D.

In many other departments of life medical men have extended lasting influences. A portion of our boyhood's literature in our early schooldays was the Arctic Expeditions of Dr. Kane and Dr. Franklin, and we are thrilled no less again, in manhood, by the North pole voyages of Dr. Nansen. From the earliest period of our nation's history our profession has always stood firm in the defense of our country's cause; and the names of Drs. Joseph Warren, Hugh Mercer and Benjamin Rush are indelibly written in the annals of the Revolution; and their deeds, recorded, show that they were not idle spectators of the fray. And the juggernaut of war never stained its wheels with nobler blood; nor left grander spirits in ruins, than those among our noble surgeons, during our last sad internecine conflict.

"A common citizenship holds sacred in the urn of memory the exalted manhood and imperishable fame of an ancestry who command their own tribute of affection and the admiration of the world."

These noble men responded to the summons of Providence for a glorious work, and, like the chosen of old, many closed their work with the blood of martyrdom. Greater heroism was never displayed by man or woman. Martyrs burned at the stake could not escape the death if they would; but these personifications and crystallizations of heroism would not abandon their posts or duty and escape the dangers, if they could; but their labors are finished; all honor to them; their mission is ended. The world will not soon look upon their like again.

"Rest on, embalmed and sainted dead!
Dear as the blood ye gave;
No impious footsteps here shall tread
The herbage of your grave;
Nor shall your glory be forgot
While Fame her record keeps.
Or Honor points to the hallowed spot
Where valor proudly sleeps."

—O'HARA.

In philosophy there are few books of greater interest than Dr. Draper's "Intellectual Development of Europe" and what might be said about the works of Dr. Chas. Darwin can be omitted, for you are all doubtless familiar with his labors, from his journey on the "Beagle," until the establishment of the new philosophy which at first brought ignominy and abuse as a reward, and at last canonized his name in science and earned for his remains a final resting place in Westminster Abbey, alongside of archbishops and cardinals, whose doctrines he opposed.

"Unveil thy bosom, faithful tomb,
Take this new treasure to thy trust,
And give these sacred relics room
To slumber in the silent dust."

In discoveries, for the benefit of suffering humanity, the physician's labors have always been active, ceaseless, and untiring. The names of the immortal Harvey, the illustrious Jenner, the imperishable Morton and the sainted McDowell are known and revered in every land and clime upon which the Great Luminary sheds his brilliance.

Sir Edwin Arnold says in his tribute to the discoverer of Anæsthesia, "Let me take permission to tell you what fillls my own heart most with thankfulness, and causes me chiefly to congratulate you on these new days of therapeutic science, is the benign, the blessed discovery, and the now almost universal employment of anæsthetics. If you look into the history of that happy revolution, you will be warned against depreciating fresh ideas by noticing how sadly slow men are to take hints which nature

gives to them of her very choicest treasures of resource. Why did not any one act upon what Sir Hnmphrey Davy so long before learned and imparted about the properties of nitrous oxide? The key was already there, but not until many years afterward did an almost casual hand (that of an American dentist) fit it into the golden door behind which sat waiting an angel of pity, kinder and more powerful than any Arabian fairy suddenly revealed in her divine beauty and bountifulness to any prince or magician of the Thousand and One Nights. Is there anything in human history which more sternly teaches that man must win every boon of nature by his own ceaseless striving than that this simple chemical and physiological secret of anæsthesia should have lurked so sadly long, in its easy formula, undeciphered, through all those waiting generations, when pain was an omnipresent tyrant, whom science could not control, and the operating room a torture chamber, dreaded almost as much by the surgeon as by the sufferer?"

"Lips that blanch not in the reeling strife
Turn silent and white from the surgeon's knife."

Thus a poet sang prior to the discovery of anæsthesia. "Think of those gallant sailors of Nelson at Trafalgar, whose bleeding stumps in the gloom of the orlop-deck, were plunged into hot pitch to stay the hemorrhage! One would almost expect that, pity for such brave men, and for the countless tender women and children, who age after age, so hopelessly endured, Telesphorus, the God of Healing, or Nature herself, would have burst the iron law of her impassive silence; and as Helen did in the Odyssey for the sorely tried Greeks, have poured this nepenthe into the bitter cup of mortal life." Dr. Holmes says:

"The man to whom the world owes this priceless gift is Dr. W. T. G. Morton." Imagine, if you please, the conflicting emotions which stirred within the heroic breast of this immortal man, when his discovery was subjected to public trial. If the experiment proved sucsessful, his name would be rendered immortal, and the operating room robbed of its greatest terrors; if it should fail, only ridicule awaited him. It was successful. What this has done for the amelioration of the horrors of pre-anæsthetic surgery, very few now living can appreciate. Instead of shrieks, cries and groans of the patient, everything now proceeds with that quiet and leisure, which is so essential to the performance of many, if not most, of our modern elaborate and prolonged operations.

The author of the *Light of Asia*, says again:

"I have myself known what it is to pass, fearless of the kind steel, into that world of black velvet tranquility, of which your magic drugs now keep the gate; and to awake as good as healed, grateful beyond words for the soft spell of enchanted peace, and the sure and faithful skill."

Who could possibly endure the torture of an operation lasting for one, two, or it may be even three hours, when every minute seems an eternity of anguish? But alas! now, "the fierce extremity of suffering has been steeped in the waters of oblivion and the deepest furrow in the knotted brow of agony has been smoothed away forever." Alas, and again alas! A great surgeon lately remarked: "I would rather be the discoverer of anæsthesia, than have won an Austerlitz or a Waterloo."

Who can measure the importance of this signal event to humanity! It remained for America to confer this priceless boon on suffering mankind. Many gilded monuments have towered heavenward to perpetuate the names and commemorate the prowess of martial heroes, who have tarnished the earth with the blood of slaughtered men, or, in the language of the "*Elegy Writer in a Country Churchyard*":

"To wade through slaughter to a throne.
And shut the gate of mercy on mankind."

have sent a wail of sorrow over entire continents! But such "frail memorials" pale into insignificance as the modest column greets the eye of the native-born or alien to sweetly sing the artless song of "The Voiceless"—two humble dentists—whom God enabled to discover a slumber that antidotes every pain.

"Such names as Warren, Jackson, Morton, Wells,
Will live as long as suffering mankind dwells
Within this world of death and funeral knells."

Thus a poet sweetly sings of the discoverers of anæsthesia. Their work is done; their mission ended; their lives were an inspiration. They at last reached the pure Empyrean, and to use Shelley's words, robed in dazzling immortality sit on thrones

"Built beyond mortal thought,
Far in the unapparent."

The spirits of great men, like immortal ships, sail the ocean of time bearing treasures of the civilization, which gave them birth. They outride the fury of all the storms and will sail on till

"The stars grow old, and the sun grows cold,
And the leaves of the judgment book unfold."

In a hallowed spot, a typical American home, in Rockbridge county, Va., Nov. 11, 1771, the "Father of Ovariotomy" first saw the light. It has been said that great

men, like great mountains, stand alone, with the valley of ancestry on the one side and the gulf of posterity on the other. But history tells us, however, that this towering character did not stand alone, for the foothills of his ancestry were of decided magnitude, prophetic of a genius destined to lay the foundation for a great revolution in the *ars chirurgica*, and to become one of the greatest benefactors of the human race. After obtaining his literary education at Georgetown, Ky., our hero in 1793–4 attended lectures at the University of Edinburgh. In 1795 he returned to America and began the practice of his profession at Danville, an aristocratic little colony not far from Lexington, Ky. He faced dangers from storm and flood, in clouds and darkness at night, at times lost in the dense forest. He was actuated by the higher principles of his profession. He feared neither *man* nor *devil*; he knew no fear except the fear of God, and that of doing wrong. The degree of his happiness was determined by the magnitude of his undertaking. In December, 1809, he was called to see a lady suffering from an ovarian tumor, and at once suggested its removal. But he stated to her that, so far as he knew, the operation had never been done—that it would be an experiment; consequently he could make no promise as to the outcome. By his manly presence and honest words he planted a new hope in heart of despair.

Thus, "he unlocked the bosom of confidence with the key of personal magnetism." The patient gave her assent to the operation; which was performed at his home at Danville. When it became known what he was about to undertake he found a mob gathered about his house. He also learned that if the patient recovered it would be well with him, but if she died from the operation, he would be at the mercy of a merciless mob. He offered up a prayer and proceeded with his work. This prayer, in fervency and literary merit, it is claimed by scholars, has never been surpassed and seldom equaled by mortal man.

What an example of true courage and resolute devotion was exhibited by this heroic, good, kind, gracious, loving and lovable man! He no doubt felt the force of the lamentation of the poet:

"Truths would you teach, to save a sinking land,
All shun, none aid you, and few understand."

No truer heroism has, or ever will be, recorded on the immortal pages of never-ending history. True courage must be deliberate, must be premeditated, must be actuated by a high, a holy and a beneficent motive. It was not a maddening pseudo-heroism stirred up by the rattle of the drum and shriek of fife on battlefields, where man seeks to slay his fellow-being. The heroism of Hannibal, Alexander, Xerxes or Napoleon can never be compared to that of this cool, calculating, thinking man. The operation was completed, and the torch lighted by Ephraim McDowell in the midnight darkness has shone forth with resplendant glory in this brilliant noonday of abdominal surgery. The century which, in a year or two, will have rolled on to the eternal past, has placed in the magnificent temple of medicine many pillars of surpassing beauty and grandeur, while its surgical columns have risen high toward heaven, where as gilded towers they fain would vie with the God-given sunshine in dispelling the chill and gloom of human agony.

"Chirurgia's tower, thy lights resplendant blaze.
Dries woman's tears and lengthens out her days.
McDowell and Sims, of our Columbia's clime,
Began the work, moved onward, nigh sublime.
To woman, then, these blessings shall be given,
Queen of the home, and home the type of heaven."

In 1817 "Three Cases of Extirpation of Diseased Ovaria," the first publication of ovariotomy, was made to the world. It was long before Europe could believe that such a brilliant, original, and magnificent improvement could originate in what was then known as the *backwoods* of America; but she has been apprised many times since of the genius of America's Physicians and Surgeons. My dear reader, should every other source of pride in your American citizenship fail, you have only to point to the recorded triumphs of American medicine and surgery to have it restored.

In 1827, Dr. Johnson, editor of the London Medico-Chirurgical Review, after announcing the results of five cases of ovariotomy, four of whom had recovered, says:

"There were circumstances in the narrative of some of the first cases that raised misgivings in our minds, for which uncharitableness we ask pardon of God and of Dr. Ephraim McDowell, of Danville."

What a noble confession! Virginia is justly proud of her orators, statesmen and soldiers, "but shall not the achievements of her statesmen succumb, at last, to the pitiless logic of events? Shall not the voice of her orators grow fainter with coming ages? Shall not the victories of her soldiers be found at last only in the libraries of students of military campaigns, whilst the fame of this village surgeon, like the ever-widening waves of the inviolate sea, shall be wafted to the utmost shores of time, hailed alike by all nations in all ages for having lessened the burden and prolonged the span of human life."

He was a handsome man. His was a beautiful life.

"Beautiful lives are those that bless
Some silent river of happiness
Whose secret fountain few can guess."

Should a student of medicine, in centuries hence, ask "who first performed ovariotomy?" the answer will be ready and unequivocal. As a result of this self-sacrificing life and wonderful result there goes forth a benediction to every home in the known world; from every hearthstone in Christendom there returni a blessing to the memory and the resting-place of Ephraim McDowell.

"Hark! how the sacred calm, that breathes around,
Bids ev'ry fierce, tumultous passion cease;
In still, small accents whisp'ring from the ground
A grateful earnest of eternal peace."

These gracious men now rest in the "Silences," but their work abides, and thus will it continue to abide centuries after the "frail memorials" that mark "each within his narrow cell forever laid" have passed into nothingness.

It is one of the paradoxes of life that, that which to eye and touch seems solid and enduring will assuredly crumble and disappear, while that which the eye and touch cannot reach, is alone immortal. There is no work of man wrought on canvass, in marble or bronze; lifted in column or cathedral, but soon or late yields up its form and beauty as time's unceasing pendulum is swung by One with whom a thousand years are as one day and one day as a thousand years. While on the other hand those viewless, intangible things, born of the brain and soul, lofty thoughts and heroic purposes—humane acts live on and on with all the dewy freshness of unfading youth. "The beings of the mind are not of clay; essentially immortal." Praxitiles and Phidias—two Athenian sculptors chiseled their dreams of beauty into the solid marble, singing merrily as they wrought,

"For art can grant what love denies,
And fix the fugitive;"

only broken statues and wretched fragments remain to tell of their forgotten dreams.

But the wonderful philosophy of Plato, the sublime thought of Socrates, the logic of Aristotle, and the epic grandeur of Homer, are as young and inspiring to-day as when first syllabled beneath the Academic groves, or chanted through the hamlets of Greece. Greece, lovely Greece! "The land of scholars and the nurse of arms!"—classic land, the haunt of the muses, the birthplace of eloquence, the mother of arts and sciences, that country whose landscape has inspired the human mind to its loftiest flights of poesy, whose art has evoked the wonder, admiration and envy of each succeeding age—where and what is she? Her arts are no more. For twenty centuries the fragments of her columns, her temples, and her palaces have been noiselessly, silently crumbling back to classic dust. She fell an easy victim before the ruthless arm of the Macedonian tyrant; yet the Philippics of Demosthenes, and the wisdom and benevolenee of Bias—the "Prince of Wise Men"—are as fresh and animating to us, as they were to the inhabitants of ancient Greece.

Nineteen centuries ago the Temple of Jerusalem, forty and six years in building, crowned the summit of Mount Moriah as the great achievement of Jewish art—the pride and wonder of the nation. Its ruins are scarcely discoverable, while the loving words of the lowly Galilean, uttered beneath the shadow of its glory, are the ever living comfort and solace of unnumbered millions. Egypt, the once proud and potent mistress of the Nile, like her mummies, sleeps in death. Her sombre Pyramids—the watch towers of eternity—rising majestic and colossal, the most impressive monuments ever reared by the hand of man, still stand, and the huge Sphinx still tosses in the face the unsolved riddle of its being; but the broken angles and loosened stones of the former, and the battered face of the latter, attest their subjection to the crumbling touch of time; but the heroic and immortal deeds, the lesson of the lives and labors of the ever-loving, tender Holmes, the sainted McDowell, the illustrious Sims and the imperishable Morton are bequeathed to the whole human race to mitigate their ancient foes—pain, disease, and the Dark-winged messenger, death; and they will continue thus to live, on and on down through the ringing groves of endless time, as a benediction to "countless thousands" yet unborn. At last you well may ask, what is their reward?

List while they speak: "In life's uneven road
Our willing hands have eased our brother's load;
One forehead smoothed, one pang of torture less.
One peaceful hour a sufferer's couch to bless,
The smile brought back to fever's parching lips,
The light restored to reason in eclipse;
Life's treasure rescued like a burning brand
Snatched from the dread destroyer's wasteful hand
Such were our simple records day by day,
For gains like these we wore our lives away.
In toilsome paths our daily bread we sought,
But bread from heaven attending angels brought;
Pain was our teacher, speaking to the heart,
Mother of pity, nurse of pitying art;
Our lesson learned, we reached the peaceful shore

Where the pale sufferer asks our aid no more—
These gracious words our welcome, our reward,
Ye served your brothers; ye have served your Lord!"

— Oliver Wendell Holmes.

Operation for Forcible and Immediate Straightening of Spinal Curvatures.

By J. W. Cokenower, M. D., Orthopedic Surgeon, Iowa College of Physicians and Surgeons, Des Moines.

The surgical treatment of tubercular affections of the bones and joints, has for many years been successfully practiced, not only by the orthopedic, but general surgeons, but not until the past few years has any special attention been given to the surgical treatment of spinal curvatures, and especially Pott's disease.

The surgical treatment of bones and joints has proven very satisfactory, and the orthopedic surgeon has no hesitancy in going into the bones or joints, curetting and removing all foreign bodies, and never thinks that he is endangering the life of his patient by disseminating the disease. Hence, there appears to be no good reason why a tubercular spinal joint should not be treated on precisely the same principles as a tubercular joint in any other part of the body, as the ankle, knee or hip, inasmuch as it is customary to straighten deformities, thus occurring in these joints, by forcible manipulation under anesthesia, either with or without a cutting operation, it would be perfectly feasible and wholly justifiable to do the same operation for the correction of deformities resulting from the same disease in the spinal bones and joints under complete anesthesia.

The objects to be obtained from such an operation, are: (1) immediate and complete or partial correction of the deformity; (2) removal of pressure and irritation from the cord, which may relieve neuralgic or paralytic symptoms; (3) separation of the diseased surfaces of bone, thus avoiding pressure and irritation which are supposed to favor continuance and spread the disease; (4) gain in length of spine; (5) avoidance of malformations of the chest walls and injurious alterations of the positions of heart and lungs; (6) and last, but not least, gives the patient a better chance for his share of longevity.

The cases I have operated upon, have been where the deformity had only existed a few months or a year, with the exception of one case, a girl fourteen years old, with deformity of five years standing, having large kyphosis and anchylosis, which I operated upon, and the patient made a very satisfactory recovery with marked improvement in the deformity.

Some noted orthopedic surgeons have operated indiscriminately with satisfactory results. Dr. Calot[1], [2], of Berck-Sur-Mer, thinks that instead of respecting the disfiguring hump, as we have been taught to do, that it is best to forcibly straighten the spine, and endeavor to obtain a cure, with little or no deformity, but advises against operating upon patients of over twenty years of age, in which the deformity has existed seven or eight years, especially if a force greater than fifty kilograms is required; but if under twenty, straightening may be accomplished even if the lump has existed as long as ten years. If too much force must be used, it is better to make an osteotomy. Calot has reported nearly three hundred cases, with but two deaths and very few accidents of any kind[3], and out of eight cases complicated with paralysis, in six the paralytic symptoms disappeared within ten days. The experience of other surgeons has been favorable in the main. Redard[1], [2], [4], of Paris, reports forty cases in which no disagreeable complications resulted. Nebel[5], reports six cases operated upon without difficulty. Ridlon[6], of Chicago, reports operating upon five cases without accident, and satisfactory results. Hoffa, of Strasburg[3], reports thirty-six cases without accident. Murray, of Liverpool[3], reports fourteen cases operated upon with success, and one of paralysis which underwent considerable improvement.—Phelps, of New York[7], reports several cases operated upon ranging in ages from two to twenty, and time of deformity from a few months to eight years, and the results were entirely satisfactory.

The consensus of opinion of operators of forcibly straightening the spine, are that they highly commend the operation, yet there are some possible disadvantages: (1) producing a cavity, which may not fill up; (2) non-formation of new bone and consequent weakness of the spine and a recurrence of deformity; (3) rupture of tubercular material into the mediastinum; (4) increase of the disease from local injury; (5) producing tubercular meningitis, and (6) injury to the cord or its membranes; none of these disadvantages are greater than are met with in the correction of tubercular deformities elsewhere in the body. The same treatment is equally applicable in ordinary spondolytis, scoliosis and rachitic curvatures; (Vulpius [8], Calot[9]).

Report of Case.—A well developed twelve year old girl, with no tubercular family history, developed in August, 1897,

a slight dorsal kyphosis, for which a plaster jacket was applied by the family physician, but did not stop the deformity. Four months later the case came under my care, and after an examination, I advised an operation, which was consented to, and under complete anesthesia, I placed the patient face downward on a table, and made extension from head and arms, and counter-extension from crest of illium and feet by three assistants, while I gradually made direct pressure with my thumbs placed upon the transverse spines of the deformed vertebræ; this pressure was kept up but a few minutes when the spine straightened, with an audible cracking and tearing noise, and three-fourths of the deformity was corrected; however, I think it is better to do the work with two or three sittings with as many months between them. Most operators suspend their patients by the feet, while putting on the plaster jacket, but to this there are some objectional features, and I prefer and used the horizontal position, with head a little lower than the body, which I find a very convenient method.

The patient was put to bed for two months, when the cast was removed and deformity found to be corrected fully sixty per cent. Another operation being refused, I put on a spinal brace, and permitted her to go around, which she did with marked improvement. There was no accident, complication or unfavorable symptoms, during or after the operation, worthy of note.

1. Centralbl. f. Chir., 1897, No. 39, (Internat. Med. Con., Moscow, Aug.)
2. Internat. Med. Cong., Moscow, Aug., 1897, Rev. de Chir., Nov., 1897.
3. Brit. Med. Jour., Nov. 20, 1897; Lancet, Nov. 20, 1897; also an editorial in the same number.
4. Lancet, Dec. 4, 1897.
5. Samml. Klin. Vortage, 191, Aug. 1, 1897.
6. Journal American Medical Association, March 26, 1898.
7. The Post Graduate Quarterly Medical Journal, 1897.
8. Munch. Med. Woch., No. 36, 1897.
9. Cong. franc. de Chir., Oct., 1897; Rev. de Chir. (Supplement), Nov.

Some Remarks Concerning Hypnotism.*

By Matthew M. Smith, B.Sc., M. A., M. D., Austin, Texas.

I shall not attempt, in the few minutes I shall detain you, to define and explain hypnotism, or describe its various phenomena, or enumerate the various conditions benefitted by it, or refer to the various methods in use to produce the hypnotic state, or speak of its interesting history from the great Mesmer down to the present time. To discuss these subjects satisfactorily would require too much time, and they can be more clearly understood by a careful perusal of any recognized work on the subject.

My intentions are to introduce the subject before the Association in order to elicit discussion and to show the great value of suggestion in the treatment of a large number of diseased conditions.

Hypnotism has been much studied during the last ten years by many of our best thinkers and scientific investigators of the Continent and England, as well as in the United States, and they have succeeded in placing it, thoroughly, upon a scientific basis.

Many of our best physicians and neurologists make use of it in their daily practice. Regular instruction is given upon hyynotism in several schools of the United States; a hypnotic magazine has been established and is published monthly, and, I think, therefore, it is time that we as physicians should at least understand its phenomena and uses.

I do not claim hypnotism to be a panacea, neither do I pose as an enthusiast, but this much I do know, that before I gave the subject much investigation I believed it to be of little value; I now know there are a great many cases that are especially suited for hypnotic treatment, and cannot be properly cured without its use.

Dr. Christian A. Herter, of New York, the translator of Dr. Bernheim's work on "Suggestive Therapeutics," says: "Hypnotism is no longer one of the curiosities of science, it is a therapeutic resource of unquestionable value, and which lies at the hands of every medical practitioner who is willing to take the trouble to inquire into its nature and the manner of its use."

I desire to impress upon you the value of the mental factor in the production and cure of disease. Dr. Maudsley says: "So intimate and essential is the sympathy between all the organic functions, of which the mind is the crown and consummation, that we may justly say of it, that it sums up and comprehends the bodily life—that every thing which is displayed outwardly is contained secretly in the innermost. We cannot truly understand the mind functions without embracing in our inquiry all the bodily functions, and I might, perhaps, without exaggeration say all the bodily features." He further says: "To me it seems not unreasonable to suppose that the mind may stamp its tone, if not its very features, on the individual elements of the body, in-

*Read at the Texas State Medical Association, 1898.

spiring them with hope and energy, or infecting them with despair and feebleness."

Dr. John Hunter says: "There is not a natural action in the body, whether voluntary or involuntary, that may not be influenced by the peculiar state of the mind at the time." It is impossible to be seized by a vivid idea without the whole body being placed in harmony with that idea. We have the tear of grief, the eye of pride, the frown of anger, the blush of embarrassment and the stare of astonishment. The typical expressions of the criminal, the idiot, the martyr, the saint, or the man of learning, all show, but too clearly, the minds influence upon the bodily frame-work.

A stick of a pin causes a message to be transmitted along the sensory nerve to the brain, where the idea of pain is formed, or *sensation acts on ideation*, and the reverse may be true oftentimes, that *ideation can produce sensation.* This goes far towards explaining the great mental cause of disease. There are no imaginary diseases, there are diseases due to the imagination, which may be accompanied by real functional disturbances; they are developed by the influence of suggestion in some form, and may be benefitted or cured by the same element if rightly used.

Certain diseased organs will produce certain typical mental symptoms. See the hope, life and determination of the consumptive on the verge of death; the despondency, fear and anxiety of heart troubles; the anger, envy and irritability when the liver is at fault, and so it is with cases involving any special organ of the body.

If due credit is given the mental factor in the treatment of diseases you will have an explanation for most of the seemingly wonderful cures, that occasionally surprise even the physician himself. The most successful physician is, he who inspiring the greatest confidence in his remedies, strengthens and exalts the imagination of the patient.

Fear and faith of all the mysterious processes of the mind exert the greatest influence over the body. "Fear predisposes to disease and the exercise of simple faith will oftentimes cure it." Daily mental gymnastics of one's well being will prove a revelation to many victims of insomnia, dyspepsia and nervous prostration. But woe to the man who forms the daily habit of counting his pulse, who watches closely his tongue, and if he gets a clinical thermometer and notes his temperature and selects some organ as the seat of trouble, such a man will soon need the services of a physician, and will be one of the most intractable cases for treatment, unless the physician is aided by the mind's influence. You have all been consulted by perfectly healthy people, who were alarmed about their cases because they had read some alarming patent medicine advertisement, or received a private communication from some expert on "loss of manhood." Much dread of surgical operations and the anxiety of childbirth, as well as many other trying ordeals can be avoided by keeping from the patient, all sensational experiences of others and by the use of well directed suggestions as to favorable results and speedy recoveries.

Suggestion is the great element in mind treatment. It is the influence exerted by an idea suggested and received by the mind. It exerts its influence in the wakeful state, even in the dreaming state, but it produces its greatest influence on a person in the hypnotic state. Suggestion introduces, cultivates and confirms an idea in the mind of the hypnotized subject; this idea forms an image which produces a sensation and the person accepts, believes and acts upon it as being original.

Suggestion now has revolutionized psychology; in the education of the child this element has great value; sectarian schools and definite religious and political faiths realize its great value and make use of it in every available way.

Experience, tact, ability to judge human nature and psychological knowledge all aid in one's success in the use of hypnotism. It should be used as judiciously as any drug in the pharmacopœia, and with other treatment when deemed advisable. Only physicians should be permitted to use hypnotism, and then it should be confined to its legitimate use in the treatment of diseased conditions. Travelling charlatans should be no more permitted to exhibit its peculiar effects before the public than an ordinary layman should be allowed to illustrate the effects of morphine, chloroform, or strychnine by placing persons under their influence upon the stage.

In presenting this paper before the association, I do not wish to be understood as not believing in the great value of drugs, *for I do*; I am a firm believer in the rational method of medication, which has for centuries accumulated facts upon which the science and art now rests, which wages war against multiform disease by every possible means, and considers and uses any agent that can succesfully combat or prevent disease in any of its forms, irrespective of where it originated or what school or sect claims its legitimate use. True science will always accept well founded facts, and intelligent and educated physicians will

make use of any element that will assist nature in the restoration of health.

I shall not take up more of your time, but will close with the following general advice as to the use of hypnotism and its lighter forms of mental treatment in the cure of disease: "As far as you can, consistently with truth, lead the patient to believe a given result will accrue, and you will have gone a long way in reaching the ends of you medication. Excite his will power, make him believe much depends upon his own determination, and always remember to administer the cordial of hope: "Hope? Aye, who can measure its power to re-animate and vivify, to whip up the languid heart and send the blood coursing through artery and vein; to drive the nerve fluid with electric speed, to awake into renewed activity every organ and tissue; to smooth, though with delusive touch, the pillow of disease and pain. Hope? who, with magic wand doth dispel our doubts and fears, and who doth line with silver sheen the dark cloud of despair.

Hope? thou beggar's wealth,
Thou lover's victory and thou sick man's health,"
* * * * *
What though the cause be not explained,
Since these effects are daily ascertained,
Let not self interest, prejudice or pride,
Induce mankind to set the means aside,
Means, which though simple, are by heaven designed
To alleviate the woes of human kind."

Glycosuria in Lithæmia (Clinic).

By R. Alexander Bate, A. B., M. D., Chief of Clinic and Assistant to the Chair of the Theory and Practice of Medicine and Clinical Medicine, in the Hospital College of Medicine; President of the Alumni Association of the Hospital College of Medicine, Louisville, Ky., etc.

Glycosuria is due to mal-assimilation, probably dependent either directly or indirectly upon deficient oxidation.

Saliva, the pancreatic and intestinal juices, and the blood-serum convert glycogen into glucose, which occurs in the blood in the proportion of 1.25 to 1.45 parts per 1,000. (Dalton.)

When the sugar reaches the proportion of 3 parts per 1,000 (Bernard), it is not assimilated, but is excreted in the urine.

The recognized causes of saccharine diabetes are: altered glocogenic function of the liver, pancreatic disorders, excess of saccharine food, and impairment of such nerve centres as cause an increased flow of blood through the liver, as injury to the floor of the fourth ventricle, etc.

The relation of glycosuria to the arthritic diathesis has been cited by many observers.

Sir Dyce Duckworth "often found gout present either in the individual or in his relations; the gouty symptoms frequently passed away as the glycosuria became fully established."

Osler reports diabetes alternating with obesity in one family for three generations.

Osteomalacia has given place to diabetes where the hygiene of the patient was improved.

The lactic acid of osteomalacia probably being oxidized one step farther into sugar.

"Heredity is as apparent in diabetes as in the other maladies dependent upon disorders of nutrition; obesity, gout, rheumatism, lithiasis asthma, certain formes of eczema, hæmorrhoids, etc." (Lyman.)

Pavy reports the case of a child two years old that died of diabetes mellitus in whose family the disease had existed for three generations.

The disease is most common between the ages of thirty and sixty years, and males are more frequently affected than females.

Bouchard has proven the morbid changes and the symptoms of diabetes are due to the dehydrating action of the sugar upon the various tissues.

That the mortality is greater among the young than the old is accounted for by the inherited progressive inability to resist nutritional disorders, so that the type is always more severe in the transmitted form.

The concensus of opinion in the treatment of saccharine diabetes seems to favor such anti-lithæmic measures as out-door exercise, bathing, and massage to promote oxidation; a diet free from the carbohydrates; together with alkalies, the lithiates, the salicylates, the benzoates, piperazine, etc.

Pancreatic preparations, codia, creosote, oxygenated waters, and probably jambul are valuable adjuvants.

Many cases of glycosuria freed from sugar in the urine for a greater or less period relapse, and may prove fatal.

The following selected cases of glycosuria, believed to be dependent upon the arthritic diathesis, yielded to anti-lithæmic measures.

Case No. 1.—Male, American, aet. 37 years, married, *circumstances*—affluent. Paternal grandfather died of apoplexy.

Patient suffering from obesity and glycosuria. Uric acid in the proportion to urea was 1.54. Upon a diet as free from uric acid forming material as possible, together

with colchicum and piperazine patient was not only relieved of the glycosuria, but became sufficiently reduced in flesh.

Case No. 2.—Female, American, aet. 32 years, married, *circumstances*—good. Father died of paralysis. Patient has had hay-fever for several seasons.

Diagnosis—Cephalgia, followed by glocosuria. Diet (anti-uric acid) and piperazine effected relief.

Case No. 3.—Male, Hebrew, aet. 40 years, *circumstances*—very moderate. Diagnosis—myalgia and glycosuria.

Patient relieved by alkaline lithiates, and methyline blue to control the attending polyuria. Several months later phosphatic calculi appeared in the urine; immediate relief was obtained by means of urotropine.

Case No. 4.—Male, American, aet. 23 years, single, *circumstances*—good. Paternal grandfather died of diabetes mellitus. "Hay-fever," symptoms recently observed.

Diagnosis—glycosuria. Patient relieved by the alkaline lithiates.

In case No. 2 the glycosuria was probably observed as soon as it occurred; in the other three cases it may have existed for some time although never previously diagnosed.

That sugar in the urine, at least temporarily, does occur as dependent upon diathetic nutritional disturbance is believed to be evinced by the cases reported.

Acute Idiopathic Pleurisy with Report of a Case.

By Charles Herwirsch, Ph. M. M., D., Instructor in Clinical Medicine, Philadelphia Polyclinic; Physician to the Out-patient Department, Rush Hospital for Consumptives, Philadelphia, Visiting Physician to the Nazarine Home for the Aged.

Some few years ago I was asked by a medical friend during a medical meeting if I believed in Idiopathic Pleurisy. My answer was yes, and at that same meeting I reported a case of a patient with this disease which I had attended, then about five years ago, who was aspirated, and of five pints serum relieved. This patient was seen by me occasionally thereafter and has been, and is now, in good health. The case I am reporting to-night is of interest, as the chest was filled up in two weeks from the onset of the disease, a very large amount of serum aspirated, and was followed by thrombosis in the right leg; phlegmasia and neuritis in same leg. The patient three weeks before he was taken sick was examined by me, as he intended to take out a policy on his life, and found to be perfectly healthy, and two weeks before the onset passed a rigid physical examination and was acepted as a good risk by another physician.

Mr. H. C. B., age 27, sent for me on the 30th of December, 1897, with a history of having taken cold the day before coming home from his office. He had been vomiting and had pain through his body. He had also a dry cough, and headache; his pulse was fully 100 degs.; his temperature in mouth 103. On examination a few friction sounds were heard at base of left chest in the axillary line on a space not larger than a child's hand could cover. He was given a fever mixture, a calomel purge and a Dover's powder. The next day pulse 96, temperature 102 degrees, respiration 24. He complained of severe pain in chest and head, tongue coated. Sodium salicylate was substituted for the Dover's powder.

Jan. 1, 1898.—Pain in chest continued severe, pulse 88, temperature 102 deg., respiration 24: felt very weak, and during chest examination got faint, cyanosed, and pulse reduced to 50. Strych. Sulphate, gr. 1–30 was administered.

Jan. 2d.—On left chest the resonance was impaired from fourth interspace down; vocal fremitus slightly impaired over same area; less pain in chest; pulse 88, temperature 101.4; complains of sleeplessness.

Jan. 4.—Vocal fremitus very much diminished over left lower chest; impairment extending upwards, pulse continues fair at 96; temperature 102.6.

Jan. 6.—Dullness over whole left chest, flatness, lower half, where vocal fremitus is absent. Has a dry cough and is very restless. Hays treatment of magnesia sulphate, tablespoonful doses of a saturated solution every hour beginning in the morning, until five or six watery stools were produced, was instituted.

Jan. 8.—The whole left side was flat, vocal fremitus absent, no pain except in head; pulse 96, temperature 101, respiration 36. Dry cupping was ordered and Sulfonalgiven at bedtime. Heart stimulation by strychnine was kept up. The next two days the upper chest was less flat and respiration better.

Jan. 13.—The left chest was completely flat again, vocal fremitus absent, the heart displaced to the right, the apex beat heard and felt two inches to the right of sternum, breathing much impaired; pulse 100, temperature 100.6 deg., respiration 36.

Jan. 14.—Dr. Theo. Erick and myself aspirated patient and relieved him of eight and a half pints of a straw colored serum. Some strychnia was administered to stim-

ulate the heart, and later morph. sulph., both hypodermatically to insure rest. On a later visit the same day the patient felt better and rested easy. From that day till the 21st the patient gradually improved, the chest slowly expanded, the breathing sounds were heard to the point of puncture (seventh interspace, axillary line), temperature between 100 and 100.4 deg., pulse between 88 and 90. He took a tablespoon of magnesia sulphate every morning and potassium iodate gr. 10 three times a day, tonics, eggs, milk, small amounts of broiled chopped meat, once a day and as little water as possible, preferable ice to allay the thirst.

On the 21st the vocal fremitus was normal on upper half of the chest and improved from that time on; pulse and temperature kept about the same, patient complained of pain in right groin. Magnesia sulphate was discontinued, digitalin, proto nuclein, and potassium iodate ten grains.

On the 2d of February I was summoned hastily and found the patient's right leg and foot black, numb, cold and without sensation. Elevation, heat and massage in a few hours restored the function of the leg again, but from then on the same began to swell and a neuritis developed which kept the patient in bed for another fortnight. The chest gradually cleared up and by chest gymnastics, the use of the pneumatic cabinet, etc., the patient, by the first of April, had regained his normal health again.

Formerly it was thought that most cases of pleurisy were due to cold and exposure. In later years investigations by different writers have shown that many cases formerly thought to be idiopathic are due to infection, especially so to tubercular.

Eichhorst, in a paper published in June, 1895, in Univ. Med. Jour., gave his investigations, which showed that from twenty-three guinea pigs injected with serous fluid from pleuritic patients, fifteen were infected with tuberculosis. From his investigations he concluded that two-thirds of the cases of serous pleurisy are tuberculous.

Fernet found in his bacteriological studies in sero-fibrinous pleurisy pneumococci in 20 per cent., staphylococci in 30 per cent., and tubercle bacilli in 15 per cent. Thru, in his studies of thirty-five cases of serous pleurisy found one tuberculous, one cancerous, another developed articular rheumatism. The others presented no lung affections. Subsequently 60 per cent. of all the patients died within a relatively short time of tuberculosis. Injections of the serous fluid in animals proved twelve tubercular infections in thirty cases. Archoff reports his investigations of serous pleurisy in 200 cases. Forty-one of these were idiopathic, forty-three were associated with tuberculosis, sixteen with rheumatism, twenty-nine with pneumonia, eleven with influenza and forty-one with other afflictions of the respiratory and circulatory organs. The exudate of fifty-seven cases was injected into guinea pigs in order to prove if tubercle bacilli were present or not. Of those, twenty-five were associated with tuberculosis, and twelve apparently were idiopathic. Of the first, 68 per cent. of the animals became tuberculous, and of the latter 75 per cent., from which this author concludes that most cases of idiopathic serous pleurisy are tubercular. The above investigations prove that microscopical investigations for tubercle bacilli give very little results as to the tubercular origin of the disease, and that only the injection of the serous fluid in animals give positive proofs. In the case reported I had the sputum from the accompanying bronchitis several times microscopically examined, but with negative results. I had not the facilities at hand, to make tests on guinea pigs and therefore can only from the present condition of my patient come to the conclusion that the pleurisy was idiopathic and not due to tubercular infection. Of the first case mentioned in this paper there is no doubt this was a case of idiopathic pleurisy as tuberculosis would surely have developed within the last five years, the time passed since the patient was under treatment.

In the early stages the membrane is red, sticky, and lustreless and covered with a thin film of lymph. If the inflammation now ceases, we have a dry pleurisy. If on the contrary the same continues, an exudate is formed, which can be sero-fibrinous, fibrinous, or purulent.

In the serofibrinous form the exudate is abundant and the fibrin found on the pleural surfaces and scattered throughout the fluid. The fluid is generally of a straw yellow color, either clear or somewhat cloudy. In the fibrinous form there is little serum and the membrane is covered with a thick butter-like exudate which unites more or less closely the pleural surfaces and causes pleuritic adhesions. In the purulent form the sack is filled with a greenish yellow pus. In tuberculosis or cancer the exudate may be hemorrhagic. Pleurisy may not always be as easy recognized as in my case. The pain in the side is generally the first sign; there is not always a chill as in pneumonia, but a slight chilliness. The pain is intensified by deep breathing or coughing. The fever is moderate, not often higher than 101 to 103 deg. If the patient is seen early there may be present at the

base of the lung a slight friction sound which is intensified as the disease progresses. When the exudate makes its appearance this sound disappears, the patient breathes rather hurriedly and shallow and generally prefers to lie on the unaffected side; as the effusion increases the patient lies indifferently on either side. Inspection shows some immobility on the affected side and as the effusion increases, the affected side appears to be increased in volume, much more so than the actual measurement determines. If the effusion is large the apex beat is displaced upwards, and if the left side is affected, often to the right of the sternum; if on the right, to possibly the left axillary line. On palpation the vocal fremitus is diminished, and as the sack is filled, absent. On percussion, dullness, and later flatness is found, which is increased with the effusion above the same Skoda resonance appears. On auscultation we find the respiratory sounds weak and distant, the vocal resonance may be diminished and later absent. On measuring the affected side is in large effusions increased an inch or more.

Acute pleurisy, in the early stages, may be mistaken for pneumonia, but the initial chill, the high temperature, and, later, the rusty sputum, should prevent a mistaken diagnosis. Also in pneumonia the face is flushed, the breathing is rapid and laborious, while in pleurisy the face is pale and the breathing suppressed. The physical signs also are different; in pneumonia there is crepitation, increased vocal fremitus and vocal resonance, with bronchial breathing. The dullness is not changed by the patient changing position, while in pleurisy the above signs are decreased, or, in large effusions, absent; the dullness changes, with the position of the patient and a splashing sound is perceived on shaking the patient.

In pleurodinia which may be mistaken for pleurisy there is no fever, no friction sounds and the pain is more diffused.

Purulent effusion can be distinguished from the serous by higher fever, sweats and chills, also a puncture with a hypodermatic needle will show the difference of the exudate.

In the treatment of pleurisy very little new has in late years been offered. For the pain bloodletting has formerly been practiced is again recommended in Tyson's practice. I prefer leeches, or dry or wet cupping. Strapping of chest, either by adhesive strips or a rubber bandage gives relief. Hot applications such as the hot water bottle, or else mustard poultice also may be tried. Dover's powder, morphine, the salicylate, or the newer coal-tar preparations may be tried. If effusion is present and of small amount, counter-irritation of Iodine is of service. I use a combination of tincture aconite and tincture belladonna, each one drachm, tinct. iodine six drachms. In this combination Iodine will help to absorb, while the other two tinctures have a local use for the pain, and this mixture can be applied more often than the pure iodine tincture, as it does not blister.

Matthew Hay's treatment consists in administering magnesia sulphate in half-ounce to ounce and a half doses early every morning or every second morning to produce four to six watery stools; at the same time the patient must not be allowed any liquid diet, but should have eggs, broiled or roast meats and dry or toast bread. Diuresis may be increased with infusion digitalis, caffein, or acetate or citrate of potassium. Potassium iodate, which formerly had a high place in pleuritic effusions appears to have none or very little effect in large effusions before aspiration. Should the fluid with all this means remain stationary or increase, or reach to the 2d interspace, or the patient suffer much with dispnœa, aspiration should be performed. And let me say here the earlier the patient is aspirated, the better is the prognosis of ultimate recovery, and the less likely deformity to the chest wall and permanent depression of the lung. Paracentesis is not a dangerous operation and with the proper antiseptic precaution and carefully performed there is no danger. The text books tell us that death may occur during the operation, but I personally have never met with such a fatality. In a number of cases I have assisted other physicians or have performed it myself. I do not know of any such fatal results among my friends or my cases.

The point of election is the seventh interspace in or near the axillary line on the left, and the sixth interspace on the right side. The arm on the side to be operated on should be drawn over to the opposite shoulder to make the interspace wider and the operation easier. Others prefer the angle of the scapula between the eighth and ninth rib. Ice, a spray of ether, or ethylchloride, may be used to anæsthetize the point, and the needle of the aspirator, a medium size by preference, should be thrust inward and upward with a quick stroke. The apparatus, which should have been tried before the operation, to see that the same is in good working order, is then to be connected and the fluid slowly withdrawn. If coughing commences, the operation should be for a short time interrupted, and if the patient gets weak or cyanosed a hypodermatic injection of strychnia or digitalis should be given. The fluid should not all

be withdrawn as the too sudden expansion of the liberated lung may cause death. After the operation a hypodermatic injection of morphine will give the patient rest. It may require a second aspiration in case the pleura should fill up again, but this is not very often required. After most of the fluid is removed, the lymphatic vessels very easily carry off the remainder, and here potassium iodate and the local application of the tincture are very useful. Digitalis is also at this stage a valuable drug, as the diuretic action and its powerful stimulating effect on the heart help to remove the remainder of the fluid. Chest gymnastics, the pneumatic cabinet and open air exercise, with the proper tonics will, in time restore the patient's health.

1702 North 28th St., Philadelphia, Pa.

Chronic Disease of the Colon and Some General Troubles Caused Thereby.

By A. G. DEARDORFF, M. D., San Francisco, California.

For many years after beginning the practice of my profession a class of cases presented themselves to me we generally class biliousness, or a bilious attack, returning every three or four weeks, and I particularly noticed these cases would have a white conjunctiva, a muddy, sallow skin, foul breath, more or less constipated, with perhaps occasional diarrhœa. While the skin was sallow it was not a condition of jaundice. These patients, living in a malarial district, were frequent subjects of malarial influence. After thoroughly investigating them I found the cause of their troubles existed in the colon, a chronic colitis, with more or less ulceration of that organ, causing ferment, gasses, and by their absorption a vitiated condition of the whole system. I have, in the majority of such cases, found them suffering with nasal catarrh, and also catarrh of the throat, and more or less debility and dyspepsia. I think I can best illustrate the subject by a few of many cases that have come under my observation.

Several years ago, while practicing in the central part of this State, in a malarial district, I have in mind the following cases:

Mr. C., about 50 years of age, eye clear and pearly white, skin sallow, liver dormant, stomach bad. He was troubled with so-called gastro-hepatic catarrh, and about every three weeks or month would have a billious attack. A few doses of brisk catharsis would relieve him, and unless followed by malaria would be up in a few days. My investigations led me to believe I had a case of chronic coleiac trouble, and treated him accordingly. Examination of rectum showed a chronic congested condition of the mucous lining. I painted over this surface with a solution of argent. nit., strength 8 grs. to ʒ dist. water, and placed him on an enemeta of normal sol. sod. chlorid; about two or three quarts of this solution and flushed the colon. The next night used two tablespoonfuls of the following mixture to two quarts of cool or tepid water:

℞ Acid carbol,..... ʒ iss
Glycerine ..... ʒ iii
Listerine....q. s..... ʒ vi

M. S.—Two tablespoonfuls to two quarts of cool or tepid water. Use with syringe.

He kept this treatment going for three or four weeks, got complete relief, and for years has been a well man. I feel certain this case had not only chronic colitis, but some small ulcers in and above the sigmoid flexure.

Another case I will report of an elderly gentleman who came from the East to settle in our sunny clime. He purchased a small vineyard, made his home there expecting to live but a short time. He had been an invalid for over twelve years. He was a confirmed dyspeptic. The day he came to my office was a very comfortable one in the fall of the year, but he had on two suits of underwear, an ordinary weight business suit, and a heavy overcoat. His vitality was so low he was cold all the time. He came with a friend, but not to consult me. In a general conversation I found he had long since given up any kind of treatment, and said he considered all doctors frauds. His symptoms were dyspepsia—clear eye, sallow skin, constipation, vitality very much below par, so to speak. When I spoke of similar cases being successfully treated by antiseptic washes and but very little or no medicine, he concluded to be examined. I found rectum much congested, numerous red spots over the surface, and many small follicles, much like millet seed, under the membrane. I opened many of these at different times with bistuary and used the nitrate silver solution up to flexure. I then placed him on the salt solution one night, and next night the list. carbol. acid solution. Before I began his treatment everything he ate at once fermented, and he was a constant sufferer with pain and gasses. The fine fruit that was so abundant he wanted badly, but dared not indulge. I placed him on a diet of toast, milk and boiled rice. In one week he reported much relieved. The second week vastly better. Third week began to eat most everything

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is the malarial parasite, the most dangerous being the organism which gives rise to the æstivo-autumnal type or so-called "typho-malaria." The diagnosis of this form of malaria is oftentimes difficult, as the cases closely approximate typhoid fever, and a distinct diagnosis, without a blood examination, may be almost impossible. This form of malaria is ordinarily refractive to quinine, and the best

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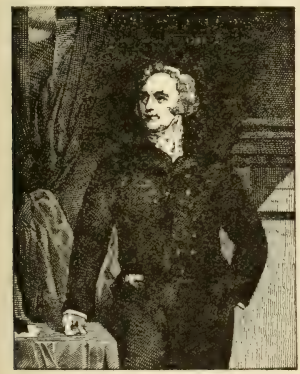

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he desired. At the end of two months had gained 25 pounds, and was making a hand at work on his vineyard. This man is now well and strong, after 4 years. He had some slight symptoms of a return of his trouble two years after I dismissed him, but a short use of his medicated washes relieved him. His disease was located in transverse and descending colon, as there was great tenderness along their course, and no doubt much ulceration.

Another case I will report is that of an old soldier, about 55 years old, who in the camps of the Potomac, during our late unpleasantness, contracted diarrhœa, and had it as often as once per month since that time. There was the clear eye, sallow skin, debility, a great deficiency in red blood corpuscles, marked soreness over transverse and descending colon. This man was so weak he could only crawl round. His physician very plainly informed him there could be nothing done for him and he must soon die. I gave him these medicated washes for the colon, put him on blood tonics, and really I never saw such improvement. This man got well in a few months, and went to work assisting his aged wife in making a living.

I have treated many such cases, and my guide is, sallow skin, dyspepsia, clear conjuctiva, and generally more or less tenderness over the colon, especially the transverse and descending. These cases do well at the watering places, as nature's mineral water washes them out, and many heal and improve or get well. But the proper treatment is the antiseptic irrigation and salt solution, and also some intestinal antiseptics. We must not forget that there are ways of medication other than through the mouth, and that this mode in this disease brings the medicated solution in apposition with the lesion, and healing takes place at once. Watch for these old chronics, doctors, and see the good results in this treatment.

14 Grant Avenue.

Don'ts for the Treatment of Pneumonia.

Dr. T. J. Mays (Philadelphia Polyclinic) has this to say:

Don't believe that acute pneumonia is a self-limited disease and will get along as well without treatment as with it. Don't hug the delusion that fever in any degree is a benefit to the patient. Don't fancy that you can always tell croupous from catarrhal pneumonia. Don't allow pain in the abdomen to draw your attention away from the chest. Frequently the beginning of pneumonia is accompanied by severe pain in the right groin, which may lead one to suspect the onset of typhoid fever. Don't direct your treatment more towards the heart than towards the lungs. Don't fail to recognize the great influence of the brain and nervous system. Don't lose sight of the serious indication of rapid and laborious breathing. Don't be afraid of applying ice to the chest in rubber bags. It will do no harm. Don't fail to apply as many bags as are necessary to cover the area of inflammation. Don't think that you can get as good results from a bath tub, or from general spongings, as you can from the application of ice. Don't become alarmed when the ice produces a sudden drop in the temperature and think the patient is going into collapse. Don't fail to retain the ice so long as fever is present and resolution has not taken place. Don't omit to apply one or two ice bags to the head. Don't overlook the beneficial influence of strychnine in combating pneumonia. Administer $\frac{1}{30}$ of a grain by the mouth every three or four hours, and beside give the same dose hypodermically once or twice a day, until the system becomes irritable. Don't omit the hypodermic injection of $\frac{1}{4}$ of a grain of morphine once or twice a day to secure rest and sleep. Don't fail to administer oxygen by inhalation more or less constantly if the patient is cyanotic or short of breath. Don't fail to bleed if cyanosis and dyspnœa are not relieved by oxygen inhalation. Don't lose sight of the great value of tincture of capsicum in relieving great nervous depression, delirium, dry, black coated, tongue, picking at the bedclothes, etc. Give it, from a half to one tablespoonful doses, in water, every two or three hours, or oftener in alcoholic pneumonia. Don't fail to give sodium salicylate, ammonium acetate, potassium acetate and potassium citrate, three grains of each, in a dessertspoonful of peppermint water, every three or four hours, if there is the least evidence of a rheumatic complication. Don't overlook the important action of quinine in this disease. Don't fail to support the patient with an abundance of nourishing food, such as milk, freshly expressed beef-juice, etc.

Announcement.

The Pittman prize of $100 for the best Medical Essay will be given at the next meeting of the State Society to be held at Asheville in 1899,

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In view of the many reasons given for the unusual amount of sickness among our soldiers, we should not lose sight of the fact that they have, almost without exception, had a change of climate to one considerably warmer than that which they were accustomed to. It is like going into the tropics. While only a small proportion have actually crossed the Tropic of Cancer yet there has been a general movement south, in most cases of a very considerable extent. To the volunteer from Michigan, New York or Colorado, our 'Sunny South' is pretty warm during the summer months. Hence it follows that they were all more or less subject to effects on their health, incident to a change of residence to the tropics.

Perhaps the most pronounced effect on the health resulting from this change of climate is anæmia. This fact is well known and has for its cause a number of conditions, chief among which is the continuous hot weather, moist atmosphere, low altitude and poor drainage.

The hot weather produces excessive perspiration, the moist air already wet, sometimes to saturation, prevents rapid evaporation of moisture both from the surface of the body and from the lungs, thus interfering directly with one of the chief functions of the skin, that of regulating the body temperature.

To an individual so conditioned metabolic disturbancees are sure to follow. Kindly nature makes an attempt to change the individual so as to adapt him to his change of environment. Partial inhibition of nutritive processes is one of the first effects noticed, thus diminishing the amount of heat necessary to be thrown off. The air at high temperature contains less oxygen per volume. The presence, in excess, of watery vapor also distends it. It follows consequently that less oxygen is inhaled at each respiration. This loss could be made up by an increased number of respirations were it not for the increased atmospheric pressure, together with the well known enervating effect of the moist, warm air tending to relax rather than stimulate to any unusual muscular effort.

Thus it will be seen how the blood itself is deleteriously affected: First, by much loss of watery elements from excessive perspiration; and second by lack of proper elimination of waste products from deficient oxygenation.

With nature's barriers against disease so broken down, the insidious malarial plasmodium largely prevalent in the localities described has little to deter him from entering into and taking up his habitat in the red blood corpuscle of such an individual, and thus is added another prime factor in increasing the anæmia by the gradual destruction of this valuable and necessary element of the blood.

That the malarial parasite may frequently be producing this destruction for largely varying lengths of time before actual fever occurs goes without saying. It is only when their toxines are present in intolerant quantities that actual fever occurs. Our confreres visiting the tropics are quickly made aware also that this disease differs widely according to locality and conditions present, from those familiar with at home. The numerous sequelæ of this disease, the acquirement by such an enfeebled individual of other diseases exposed to, especially typhoid, by a polluted water supply is naturally more apt to follow than in one otherwise healthy and not exposed to the debilitating and climatic effects referred to. It will therefore be apparent that to treat these individuals best cool air besides food and medicine is not enough, but it should be pure and dry, a condition found only at an elevation of 500 or 1,000 feet above the sea level.

ACUTE PNEUMONIA.

The investigations of Putnam, of Boston, compiled from statistics of Massachusetts, Glasgow, and England, show that the mortality from pneumonia has increased nearly five hundred per cent. during the last thirty years. This astonishing figure seems incredible. The consensus of opinion among Eastern clinicians, however, points to an undoubted fact that this disease has a death rate second to phthisis only and in hospital and private practice is more fatal than any other acute malady in adults.

The course of the disease is sthenic and rapid. Abundant proof is not wanting as to its infectious nature. As long ago as

1750 Boerhaave, of Leyden and his illustrious pupil Huxham, of Plymouth, contended for the theory long before bacteriology discerned the bacillus lanciolatus. The self limited character of the disease was known by Dietl of Vienna, who learned it from Hahneman and his pupils. The deductions of later and wiser teachers from observations of facts appear to accord with the theory inasmuch as they establish the self-limited and infectious character of the disease. Bennett and Flint labored to inculcate these principles. Then came the digitalis period of therapeutics and again the coal tar derivatives, from the grasp of which the profession does not easily free itself. The rationale of the present day demands such remedial agents as will support the flagging heart. Apnœa is no longer regarded as the cause of dissolution.

Pneumonia does not occupy a unique position in its infectious aspect. The resemblance to a typhoid state is strongly marked particularly in the nervous manifestations. In the latter disease we have about ceased to treat the disease itself. We lean toward the belief that its self limited character will vouchsafe a favorable outcome if the patient's vital forces be well sustained. In the treatment of pneumonia we will meet with success if we apply our efforts toward opposing the formation and favoring the elimination of the disease toxins, the tendency of which is to depress and overwhelm the vital forces. We have not to deal with a pure inflammatory lung disease. To be consistent with inflammation, such as the term implies, the lung tissue itself should be the seat of disorder and the nutrient blood supply undergoing all the classic changes of stasis and diapedesis. What we do find is an exudate, to be sure, but one which in a few days resolves, drawing away from the alveolar walls and stroma to reveal those structures in a normal state. The nutrient blood supply is unaffected. The veritable destruction of lung tissue is not in accord with the microscopic evidence but does find its proper classification under a different variety—the lobular type. We must then realize that the functional blood supply is the source of exudates and consolidation.

What are the proper agents for the relief of the conditions? Any agents are to be commended that will make the patient comfortable, relieve pain and dyspnœa, reduce the pyrexia, strengthen the pulse, tone the heart, stimulate nerve energy and favor the resorption of exudate and elimination of waste products and toxins.

At the outset a full dose of calomel quiets the nervous irritability and cleans out the *primæ viæ*. Morphine may be used to relieve pain and to serve as tonic to the heart muscle. Such drugs as digitalis, strychnine, caffein, amyl-nitrite and atropin are of potent use. Strychnine is most valuable and may be given in doses of one-fortieth to one-tenth grain every few hours to the verge of trismus.

Caffein is beneficial in cases where mental torpor is pronounced, and where there is much jactitation. Atropin surpasses either where cyanosis is extreme and sweating copious, but does not so powerfully excite the respiratory centres as strychnine. The combined use of strychnine and digitalis is useful. Alcohol is beneficial in children and the aged. Of decided advantage is cold water as a therapeutic agent. Probably the most scientific and convenient method of application is by means of wet cold compresses. This method is warmly supported by Baruch of New York. He gives minute directions for the application in an article on the management of pneumonia patients, in the Medical News, Vol. 70, No. 1. The compresses are cut to fit the chest of the patient, are applied like a waistcoat and covered with a fitted coat of flannel. The water out of which the compresses are lightly wrung should have a temperature of 60 degrees F.

The compresses are soothing and stimulating. They are kept on but half an hour or an hour and are then renewed.

The diet should be light and most nutritious. Six or eight ounces of fluid nourishment may be given every two or three hours.

MEDICAL EDUCATION.

The rapid advance in medical education in the United States is most gratifying. The lines along which this advance is making are numerous. It is evidenced by the severer conditions imposed upon candidates seeking admission to the larger and more influential medical schools. It is still true that the so-called "proprietary" medical schools, in their anxiety to increase their clientage, maintain a lower standard of admission, but the schools which are departments of a university and are thus less dependent upon patronage for their maintenance have within the past few years made long strides in the direction of establishing a higher standard of attainments as a prerequisite to admission to a course of medical study.

Thus in not a few of the greater universities the possession of a degree of arts or an equivalent degree is essential to admission to the medical department. This is the inevitable trend, and it needs no pro-

phetic eye to discern the time when this standard will find universal acceptance. Many conditions impel toward the adoption of this standard. A broad general training should underlie all professional study. It is true that the want of early opportunity may in some instances be supplied by study in later life; but the profession of medicine is too engrossing to permit early deficiencies to find a supply in this way.

Moreover the impetuous rush of half educated youth into the ranks of the medical profession has served to diminish the reputation for learning which a profession ought of right to enjoy. It has substituted pretension and commercial activity for the substantial worth and scientific attainment which the degreeof doctor of medicine ought always to typify. It has overcrowded a noble profession with thousands whose inferior preparation for the work of the scientific physician has degraded their activity to the level of a trade, and resulted in diminishing the legitimate returns of those whose ampler preparation deserved a wider recognition and encouragement. One's respect for one's profession, great as it may be, cannot fail to suffer when one finds that splendid attainments and broad culture are speedily reduced to the standard of a deficient and imperfect general education, through the leveling influence of the degree of doctor of medicine. Let us rejoice that the first gleams of a sounder policy have at last reached our schools of medical learning.

This advance finds further expression in the clinical extension of courses of study from two or three years to four years or more, in increased opportunities for clerical investigation, in vast improvements in facilities for laboratory work, and in the substitution of class-room teaching for the ineffective and obsolescent didactic lecture. In truth the great inferiority of medical schools to colleges in general has for years been typified by their perpetuation of the policy of lecturing to students instead of teaching them. The lecture has afforded ambitious physicians an opportunity for self-exhibition, but it has accomplished little else.

A powerful influence in favor of the improvement of medical instruction has been the introduction of state registration and supervision now almost universal. This has operated to improve the quality of instruction given, in order to avoid the mortification of failure resulting from inadequate preparation.

The outlook for medical education is highly encouraging, and the time is not far distant when admission to the grand army of physicians shall signify something more than attendance upon a few lectures in a school of medicine. It will presuppose a broad general training through laboratory courses in the various departments of medical study, intimate and thorough bedside instruction, clinical demonstrations, and general hospital experience. When the degree of dooctor of medicine shall signify for every one who enters upon the noble vocation of the healer such a preparation for his laborious duties, we may then justly and fairly call the sphere of our life work a profession.

DO NOT FORGET THE HEART.

A train of cars cannot run well, a steamer cannot make its voyage, or a set of machinery do its required work unless the engine is strong and in good working order.

These are axioms and are recognized by every body, and no one is surprised at the delay when the report is given out that the engine is out of order.

We scientific workers and observers seem blind to this fact and try to treat our patients as though a sound heart was surely behind the system, and the trouble must be somewhere else in the system.

If we will carefully examine the heart in each and every case that comes to our offices we will be amazed at the number of weakened and crippled hearts we find. By studying the histories of our patients we will often find a childhood scarlatina, or an obscure, unrecognized and untreated joint trouble which has crippled the heart. The patient claims the heart is all right and cites in proof thereof one or more examinations for life insurance which to them is proof positive of a sound heart.

Yet the bronchitis, the fermentative dyspepsia, the renal insufficiency do not yield to the use of the ordinary and orthodox treatment—but when digitalis or like drugs are added to those remedies, the circulation is improved and the trouble complained of steals away as silently as the Arab of poetry.

Too many of the "ills that flesh is heir to" are regarded as entities by patient and physician alike and treated as such, but such is not the case as we were taught in our old school days by the fable of the rebellion of the different organs of the body against the whole, which resulted in the disaster to the body, special as well as general.

All parts of the body are inter-dependent. The stomach cannot lose the help of the heart any more than it can give up the absorbable glands. The bronchitis that does not yield to the use of expectorants needs the aid of heart tonics, and the renal insufficiency that is not relieved by diuretics needs heart tonics and vaso-motor dilators.

No doubt in cases of diphtheria, scarlatina, rheumatism and the more important acute disorders, the heart has enough attention and to spare, but the chronic troubles, which make up the bulk of our practice, need more attention paid to the *vis a tergo*, and when the help is turned toward the heart the results of chronic ailments will be changed and for the better. If the result is not cure it will at least be increase of days and freedom from pain and discomfort. These patients need all our help. Again, "Forget not the heart!"

LET US EXAMINE OUR PATIENTS.

How many times patients come to our offices, or come under our care at their homes, and tell us that they have a bronchitis, an asthma, a catarrh of the stomach, or many another home diagnosed disease, and we, in our carelessness and, may be, haste take their diagnosis, prescribe for the disease and leave them unimproved or growing worse. When, to our astonishment, they change attendants, and, to our chagrin, begin to improve, our pride is hurt, our reputation is injured, and our prestige is lost. Whose fault is it? Ours alone. What is the fault? Simply carelessness, or worse, laziness.

The great curse of the medical profession at large is carelessness. The great difference between the lowlands and high places in the medical profession depends only on the care and time taken in the diagnosis of individual cases. Any physician of average intelligence can treat successfully a previously diagnosed case, but how many can carefully and accurately diagnosticate these cases. It needs care and patience more than brilliancy. It looks well to the family for a physician to enter the sick room with an important air, and immediately see the cause of the trouble and give it a high sounding name. In that neighborhood he is on a par with the city clairvoyant who diagnoses ails from a specimen of urine and a lock of hair. No, the physician of to-day is not a magician or the wonder worker of old, but a careful, painstaking student of the phenomena of disease.

How much more honest it is (and how much safer!) to look over the patient carefully, auscultate the lungs, listen to the heart, inquire into the state of the bowels, inspect the tongue, examine the skin, and analyze the urine.

As a matter of simple worldly advertising it pays to spend a fair amount of time over a patient, especially on the first visit. And how often home-made diagnoses give way under the careful examination of the studious mind. The obstinate, distressing cough examined with care, leads to the diagnosis of grave cardiac lesion, and the prescriptions of tolutani and scillæ are superseded by digitalis and strychnine with the immediate, almost miraculous, cessation of the cough.

Again, the headache that runs the gamut of neuralgia tablets, coal-tar compounds, and the headache cases of the drug stores resolves itself into a case of eye-strain due to astigmatism, and properly fitted glasses make the headache a thing of the past; and we have the gratitude of a thankful patient and the satisfaction of duty well done.

Let us carefully examine each patient, look upon each one as if he was our only case. Remember the body is not a machine, and cases can not be treated in classes, but we must individualize, and study each case by itself, and for the time be a specialist with each separate case, then we can not fail to relieve those cases which can be relieved, and at least we shall avoid the consciousness of having been neglectful of our patients.

IDIOSYNCRASY.

In our studies of drugs and in experiments on animals we find that certain drugs have certain regular effects under given conditions, and then in text-books and in our practice we advise and use these drugs with more or less success.

But some day there comes a case when the proven and tried drug fails –it does not have its accustomed effect, but another and may be opposite effect—our first thought is that the preparation used is impure or deteriorated, but the drug seems to act as usual when tried in another case, and we are forced to the conclusion that this drug will not have its customary effect upon this individual—this patient has an idiosyncrasy for this drug, and our treatment must be changed. Here it is that the studious and watchful attendant gets better and quicker results than the man of routine habit, who always uses the same drug for the same set of symptoms. Again, this is the class of cases in which the old "family physician" supersedes the young specialist. He has recognized that certain families can not take morphine, or its congeners, with the same good effects as the majority; that neuralgia will yield to the use of gelsemium in one family, and the drug given in the same doses in a neighboring family will produce peculiar delusions without relieving the neuralgia; that belladonna will relieve fever and cure headache in one case and in the next the drug must be avoided, even so far

as giving aloin, strychnia and belladonna pills for a laxative.

We can all recall cases in our practice, ranging from the person who is sure she can not take morphine for pain, but if ignorant of the drug taken can get great benefit from some other preparation of opium, to the person who is always poisoned by handling the common field daisy.

One case comes to my mind which beautifully illustrates this class of cases.

A man of rheumatic diathesis was taken ill with influenza, and on my prescribing quinine he stated that he could not take quinine at all as it gave him rheumatism. I was skeptical and ordered him to take quinine, grains ii, every four hours; within 24 hours, to my astonishment, his knees and ankles were swollen and hot, with all the symptoms of acute articular rheumatism which ran a course of ten to fourteen days, attacking wrists and elbows before the recovery.

In about three weeks, as a tonic, I prescribed elixir of calisaya, iron and strychnine. At my next visit he inquired if that mixture contained any quinine, as his joints began to pain as though he was going to have an attack of rheumatism. On my changing the tonic, leaving out the calisaya, all the symptoms disappeared from the joints.

He stated that quinine had always affected his joints since he had lived in Michigan, where he was thoroughly saturated with quinine for fever and ague years ago.

Idiosyncrasy knows no law, follows no rules, and gives no warnings, so we should be watchful over our cases, especially when trying a new or powerful drug, and it might be prudent and wise to feel our way with very small doses before giving the regular safe dose.

It may be by a still closer study of the drug—as has been done in many drugs, especially opium—we can find the disturbing element, and then by removing that especial offending alkaloid, or glucoside, the drug may be given safely and with benefit.

"WELL LIKED BY HIS FELLOWS."

How pleasant the thought and how salutory the feeling to either the country or the city physician to be well liked by his fellows. We always find him at the State medical meetings taking a hearty interest in them, the more so if he has not a paper to read. He apprciates above all their importance to his good standing with his fellows and in the eyes of the laity. With limited time for recreation, or unable to afford one or two solid weeks for a vacation, he grants himself at least the happy diversity of those two or three days among his fellows to see and hear what is being done outside of his own limited field of daily rounds.

Here he feels himself indeed "E Pluribus Unum," and in those two days has enough of the ego extracted to better find his mental ratio as to *his own* shortcomings. He sees the *man*, has the satisfaction of *meeting* him. He becomes his friend and helper in time of professional trials.

There, too, he may greet old playmates of his boyhood and with them recall "the days that are no more." Again he is overjoyed, when, behind the full gray beard or beneath the hairless pate he recognizes the face of an old classmate whom he has not seen for years. The name may have slipped his mind, but the happy smile of recognition gives him joy, and the hand shake is there to back it.

The State medical meeting is the doctor's exchange where his personal gain by far overbalances the value of the time spent and the cost of the trip. Or we may call it the doctor's Bee-Hive (and the bee hives of today have their Queens) where the workers are always found. It is only the indifferent drone whose hum we never hear at this annual round. His presence there is a duty to himself, to his fellows, to his patients, and to the State Medical Society. He should feel it a religious duty which helps wonderfully to make him stronger in the sacred profession which he has undertaken, and which can be appreciated only by those members whom we meet there from year to year.

He will be well liked by his fellows.

PELVIC SURGERY.

Conservatism in pelvic surgery is something about which we hear a good deal, but of which we see, alas! too little. Every year in the United States hundreds of women are unnecessarily unsexed. We decry this wholesale mutilation of our women. We are not disclaiming the need for pelvic surgery; but we do protest against the removal of organs which might easily be saved by plastic operative work. Every day we see ovaries sacrificed because they have two or three small cysts growing on them. This should not be. Dissect out the cyst sacks, cauterize the adjacent ovarian tissues, stitch up the rents in the ovary, but leave the healthy ovarian tissue behind, even if there is only a small piece that has escaped destruction from the cystic degeneration.

These remarks, of course, do not apply to casee in which there is accompanying pyosalpynx; but how frequently do we find

surgeons removing ovaries, because they are slightly cystic, in cases where the tubes and uterus are in a perfectly healthy condition. It is against this practice we protest. Ovarian cysts of considerable size, say the size of a walnut, or even larger, can be, without much trouble, dissected out, and the ovarian stroma stitched up with complete alleviation of the pain and tension, and the woman left functionally and sexually perfect. And what applies to the ovaries applies with equal force to the other pelvic viscera. For instance fairly good sized intra-mural fibroids of the uterus—say the size of a man's fist—can be shelled out by splitting through the uterine substance down to the fibroid mass, and, with the fingers, detaching same from the adjacent uterine stroma.

A first-class surgeon recently operated on a uterine fibroid, doing an abdominal hysterectomy, and subjecting the patient to the shock of a two-hour operation, and subsequent investigation of the tumor showed that it was a single intra-mural fibroid which shelled out quite easily when the overlying uterine tissue was split with a knife. This might have been done with the organs in place and the woman saved with healthy pelvic organs, instead of which she succumbed to the shock of the longer operation and the manipulations attendant thereon. Volumes might be written, but suffice it to say that the greatest surgeon is not he who can successfully remove the largest number of organs, but rather he who can successfully remove the greatest amount of disease and *save* the largest number of organs.

A TABLET TO THE MEMORY OF WILLIAM BEAUMONT.

It is seventy-six years since Dr. William Beaumont, a surgeon in the United States Navy, stationed at Mackinac Island, conducted his remarkable experiments in gastric digestion through the gunshot fistula in the side of his patient Alexis St. Martin.

It is interesting to know that the quaint old house where St. Martin lay still stands, unnoticed and unmarked. The residents of the Island stare at you doubtingly as you ask to learn the locality, and are entirely unconscious that they dwell near a place of such historic interest to the profession. The little house stands half way up the hill as you approach the old Fort. It is two stories high, basement and main floor, but the basement alone is of interest to us. A lattice shields the interior from public view in front and on entering the low doorway in it one observes that the cellar has been divided by a modern partition, one of the rooms serving as a kitchen. The original larger room is of stone, cemented on floor, walls and ceiling. The windows are old fashioned, high from the ground, small and square. On one side is the old fire-place cut longitudinally with many cupboard shelves. Quaint old bits of furniture and draperies and more modern odds and ends lie scattered about over the floor or piled in corners—the accumulations of years. A stone shelf projecting from the wall in one corner remains intact, upon which lay St. Martin when the surgeon first walked down the hill to visit him. Everything is as it was abandoned long since. The partition and cupboard shelves alone mark the handiwork of modern utilitarianism.

It is a genuine pleasure to know that next year the seventy-seventh anniversary of the experiments and the forty-sixth of Dr. Beaumont's death, the Medical Society of the upper peninsula of Michigan will suitably though tardily, mark the scene of Beaumont's labors by a tablet to his memory, acknowledging his efforts in behalf of mankind.

MEDICAL ETHICS.

Ethics is the science of right conduct. Matthew Arnold says that conduct constitutes three-fourths of life. It would therefore appear that ethics covers a very extensive field. Medical ethics has relation to those rights and duties which originate from the practice of medicine. Now these rights and duties are sufficiently obvious; yet it has been found necessary to codify them, as, for instance, in the code of ethics adopted by the American Medical Association.

"Why has this been found necessary?" it may be asked. Because the law is a terror to evil doers, and an authoritative statement of the rights and obligations arising from professional intercourse may be necessary to fix delinquency and pillory the offender. But for the right minded it is unnecessary. There is not a rule in the above mentioned code which high-breeding and a proper respect for the rights of others does not immediately suggest. That, for instance, it should ever have been necessary to insert Art. V., Sect 1, in the code proves how far from the ideal of high-bred and gentlemanly intercourse a certain proportion of the professsion must have strayed. That paragraph reads as follows:

"Medicine is a liberal profession and those admitted to its ranks should found their expectations of practice upon the extent of their qualificatons, not on intrigue or artifice."

Is it possible that any member of a liberal profession has ever hoped to succeed

through intrigue or artifice rather than through the legitimate influence of superior qualifications?

We are informed that the American code is based upon the instructions of Dr. Thos. Percival to his son who was about to engage in medical practice. These were published in 1803. They contain, no doubt, the result of this accomplished physician's observations upon the ordinary infractions of the rules of right conduct which were prevalent in his day.

There is too much reason to believe that as great need exists for a statement of the rules governing professional conduct today as existed in the days of Dr. Percival. Unfortunately high breeding and chivalrous intercourse are not universal. All the members of our great brotherhood are not ornaments of the profession. The rules of gentlemanly intercourse, instantly recognized by the well-bred, are repudiated by those who are wanting in a proper regard for the demands of professional association. Swayed by the fierce competitions of commercial life, they reject the obvious rules governing professional intercourse, and introduce an element of discord into what ought to be a harmonious and happy guild of educated professional gentlemen.

Education cannot accomplish everything —at least in a single generation. One's education should begin with one's ancestors. Nevertheless the advancing conditions of admission to the profession of medicine will in the future solve a good many problems that now disturb our serenity. Among these may be enumerated half education, boorishness and possibly intrigue and artifice in the pushing of one's professional fortunes. While Froude has asserted that education does not touch the conscience, it may well be doubted whether such an article as that quoted above could find a place in the code of a body of physicians every member of whom had had an adequate training for the proper discharge of his professional duties.

DISPENSING AND PRESCRIBING IN THE LIGHT OF EVOLUTION.

First of all, let it be premised, many physicians from the character of their locations are obliged to dispense their own remedies. A large proportion of the physicians in the United States practice in the country. Many carry on their beneficent activity in regions far removed from a pharmacy. Among such there can be no choice. Medicines must be carried or afterwards compounded when the physician returns from his rounds. To a certain extent also every physician must dispense his remedies, whether he reside in the city or the country. Emergencies will not wait upon the pharmacist, but require the instantaneous application of the indicated treatment.

The prescribing physician who is dependent upon the pharmacist for his remedies is indeed but the outgrowth of a more complex social organism which seeks to limit the activity of each social unit to narrower spheres and thus improve the quality of the product. This is a fair statement of the law under which prescribing physician and pharmacist have come into existence as correlated and mutually interdependent quantities. It is but a fresh application of the doctrine of the division of labor so beautifully developed by Adam Smith in his "Wealth of Nations."

Unfortunately, however, this ideal relation, which in the past has liberated the physician from the drudgery of compounding medicines, while it contributed generously to the support of the pharmacist, is threatened with destruction because of an invasion of the physician's sphere by the commercial activity of the pharmacist. The latter has discovered that he can not only compound the physician's prescriptions, but that he can also furnish a diagnosis and treatment to a largely increasing clientele. We must admit, of course, in extenuation of this invasion of the physician's legitimate sphere, that the druggist is often tempted thereto by his customer. But the yielding is none the less absolutely destructive of the relation of mutual dependence which called the pharmacist into being.

This is not the time to argue that the pharmacist should restrain his commercial activity within the sphere which the evolution of the social state has developed. The differences of training and the growing severity of State supervision of the qualifications for practice all presuppose that the sphere of the physician should not be invaded under the temptation of a mere commercial advantage. But it is fitting to state, that inasmuch as this division of labor came into operation through a recognition of mutual advantage, so soon as it is apparent that it operates exclusively to the advantages of one party the old type of the dispensing physician will necessarily revive.

There is sufficient evidence that this is already taking place. Many physicians, who found the pharmacist a useful adjunct to his professional labor, so long as the latter kept within his proper sphere, have revived the practice of dispensing their medicines. And as if the progress of art had been accurately timed to enable the

physician to redress the balance which a too eager commercialism had impaired, the tablet preparation came into being at a moment when the busy practitioner seemed almost helplessly dependent upon the pharmacist.

In conclusion it may be said that the distribution of the two offices typified by the physician and the pharmacist is still the ideal scientific arrangement. For the physician it secures a wider range of remedies greater elegance of preparation, relief from added anxieties, and a saving of time which may be profitably utilized in the many avenues of a busy practitioner's life. For the pharmacist it means an honorable and profitable connection with professional men, whose own interest would be served by the prosperity of the druggists to whom they send their patients.

But, as experience amply proves that this relation is either effectually destroyed or in process of destruction, we find here as in biology, a necessary and inevitable reversion to a former type—the dispensing physician. Physicians will return to the custom of dispensing, and the pharmacist will continue to occupy the ground he has gained, making rapid and fresh reprisals in the territory of his former allies until the strong arm of the law is finally invoked to drive him back to the field of his former and legitimate activity. That the prescribing physician should then reappear, would not be inconsistent with his own dignity and advantage.

IGNORANCE.

The world is still deceived by ignorance. We, of this nineteenth century are too prone to congratulate ourselves on an imaginary possession of knowledge far exceeding the ages past. This sense of self-sufficiency lulls into a state of dangerous inactivity. Occasionally something happens to waken us, and we are brought face to face with the fact that we are still in darkness.

Universal knowledge as regards medicine is limited indeed. So much so that this fact constitutes the stock in trade of a large part of the so-called profession itself. It is not so much what we know that makes us in demand, but rather what our neighbors *don't* know that forms the secret of our hold upon them. Above this darksome sea of ignorance and superstition the hydra-headed monster of disease and death rears his loathsome front and works fearful havoc among suffering humanity. The cringing victims fly to any source for succor and relief. Then it is that the charlatan and medical demagogue gets in his deadly work. Himself as ignorant as dirt he ministers to others scarcely less so. To him the simplest laws of Hygiene, Physiology or Chemistry are as meaningless as the wildest fable that ever puzzled the brain of a Solon.

Nature holds no treasured secrets in store for him. Her works are a sealed book to his benighted soul. The keys to this precious storehouse of knowledge or any part of it, have never been in his possession. Never, even, has he thought of trying to obtain them.

On and on, over land and sea he pushes his awful propaganda of superstition and magic, and the dear people, God bless the mark! flock to his standard. The lying optimist that feigns to believe that humanity is out of its swaddling cloths, let him behold this sight and he will weep if he yet possess conscience. A Yellow Stone Kit, an Indian, or Cancer Doctor, or a blatant, self-assertive, advertising itinerant "specialist," can muster more followers in this land of ours than can a Dellafield, a Loomis or an Osler. It is enough to make the angels weep briny tears of pity. Where is the remedy? Raise the standard! Raise the standard is the universal cry.

Yes, that is good. But let us strike at the trouble at its fountain head. The professional standard is now far in advance of general appreciation. The best way to raise it is to commence at the bottom—the common schools of our country. Through them to enforce and encourage a wider dissemination of the fundamentals of medicine. When this is done then the doctor, for very self-protection will be forced to fly higher. Woe to the land and country where ignorance sits enthroned on her hearthstone, and where magic and superstition are expected to supply the place of knowledge.

PELVIMETRY IN THE PRACTICE OF OBSTETRICS.

Pelvimetry is so essential to the rational and scientific practice of obstetrics, that its routine adoption by the general practitioner is a consummation devoutly to be wished for. Many *elective* obstetrical operations would be considered and undertaken by physicians if they had ascertained previously by pelvic measurements that they had to deal with a case possessing abnormally narrow pelvic diameters. We echo the sentiments expressed by Grandin and Jarman when they say: "A scientific knowledge of the configuration of the female pelvis and of the methods of estimating its capacity is an essential prelude to the practice of midwifery. The surgical side of the art, in particular, rests its results on accurate pelvimetry. The fate of the woman and of

the fœtus is intimately linked with the expertness of the physician in determining, before or at the time of labor, the probable capacity of the pelvis in its relation to the estimated size of the fœtus. It should ever be remembered that the pelvimeter is as indispensable to the obstetrician as is the microscope to the physiologist, and, therefore, that it should be associated with pregnancy in his mind as the forceps is with labor. A careful investigation of the information afforded by the routine practice of pelvimetry will convince any one that the pelvic diameters can, with a very fair degree of accuracy, be determined. This being the case we think, then, that the practitioner who does not use this means of ascertaining the pelvic diameters of the woman whom he expects to confine is guilty of wanton negligence. "When we have to do with an art whose end is the saving of human life, any neglect to make ourselves masters of the same becomes a crime."

THE SEEMING AND THE REAL.

The last two decades of the world's history has sharply differentiated the personnel of the medical profession.

The modern doctor, ideally speaking, is a type quite distinct from his more ancient progenitor; and notwithstanding his surer scientific footing, the comparison is not always favorable to him.

Who does not recall with feelings closely akin to love and veneration, the stately figure of that fine old gentleman of the long ago, the family physician, who swept along our feverish dreams in sickness, a veritable angel with "healing in his wings," his benign face lit up with a kindly smile of encouragement and hope as he bent over our pillow, and his whole make up attuned to a spirit of considerate sympathy and interest, as he tried with his merry laugh to dissuade us from a state of melancholia by reason of our malady. And when it came to business his fine mind wandering into every nook and cranny of our anatomy (where now the probe and aspirator is too prone to go) in dreamy pathological speculation as to our condition. He didn't thrust a clinical thermometer under our fevered tongue, put a stethoscope on our heaving bosom, or an X-ray machine to our swollen abdomen, but some how or another we always felt better when he would come.

In his stead we have now the sleek and learned gentleman, who comes with an array of instruments, as a carpenter to take lines and bounds. Cold, impassive, inexorable! Like some dark fate from the nether world. No time to exchange a friendly greeting. The mad rush of things demands us elsewhere. "We'll just stick this little instrument in this swelling (it won't hurt) to see what's the matter, and another here. Ah, this is serious. My friend how long have you been in this neglectful state? Well, well! We'll do the best we can for you—come back to-morrow." Exit. And I sit and wonder which is the seeming and which the real. What constitutes the Doctor of to-day? Like every other question, he is to be found in the middle of these two extremes. Ethical and wise enough to be in touch with the old regime, and alive and wide awake enough to keep step with the tramp, tramp, of the thrilling, moving world. What rude and boisterous hand would thrust that old and silent figure standing way out on the outskirts of action away from the scene? Stop my brother! Stay your unhallowed touch! We have much to learn of him and his methods before he goes to anwer the long roll. He bore the sacred ark twenty years ago up to a point where it was shifted to your strong shoulders. He represents a link in the golden chain of truth and progress that were best not broken. Let him rest. But be thou not one to say his life has been in vain or his work a failure. Indeed hadst thou not best look sharply and beg him for something of the mantle of his greatness to fall on you?

CEREBRAL EMBOLI.

We believe that cases of Cerebral Emboli following uterine curettement are not very common. It may be interesting and instructive, therefore, to call attention to such a case which occurred in the practice of a western surgeon. After a miscarriage there was retention of the secundines. The patient was anæsthetized, placed upon the operating table, the retained placenta removed, and the uterus thoroughly irrigated and packed. Shortly after the operation the patient passed into a state of profound collapse. Speech at this time was normal. In the course of an hour the speech became thick and muttering—a condition which was at first attributed to the whiskey used for stimulation—and finally articulation became impossible. It was found that the protruded tongue was drawn to the right, while the angles of the mouth were drawn to the left. A diagnosis of cerebral embolus was then made. No other signs of paralysis were evident. Two weeks after operation shows very marked improvement in articulation, and it is a safe inference that the patient will fully recover her speech. There were no signs of sepsis in the case.

"VENEREAL DISEASES."

Venereal diseases are undoubtedly more prevalent now than in the days of Job, whom best authorities say had syphilis. It is quite certain also, that the future child will pronounce many bitter epithets against his parent for having begotten him during a state of infection from some venereal trouble. There should be no wonder that the race is growing weaker when we consider the condition of many of the forefathers of our total population taken together with the fact that the sins of the fathers are visited upon the offspring even to the fourth generation.

There is cause for surprise, however, that a sound child should now come into the world. If a census were taken of our present population there would be a most startling percentage of our people who are stigmatized by some venereal infection, either by heredity or otherwise.

If the theory of atavism be true, it will produce a two-fold effect upon offspring in that it tends to assume the characteristics of its ancestors, whether for good or evil. It seems reasonable that hereditary influences may in a measure, be accounted for in the theory of atavism. It would also appear to be a cause for congratulation that the atavistic tendencies may act as a kind of inhibitory apparatus; keeping the bad influences somewhat in check, and attenuated by Nature's strong inclination to revert to former types.

If there were not some inexplainable influence at work in the processes of human nature that tend to counteract the bad, the race would soon become extinct.

One who studies now, though, the influences of heredity and the wide-spread ravages of venereal diseases, cannot but look with an eye of pessimism upon the future of the race.

There ought to be all the influences possible brought to bear in order that venereal diseases may be decreased. The physicians of every town and city, could by concert of action, become the most potent factor in this matter. He could teach his friends and patients cleanliness and how, in a large measure, to prevent the catching of such diseases. It is also the physician's duty to urge the immediate circumcision of every male child, that the future boy and man may at least have that much advantage over his previous condition. It would be the physician's province to teach his clientele the advantages of temperance at least, if not chastity. The physicians of the country are the capable ones for bettering the conditions that exist, and which must continue to grow worse unless changed through the efforts of scientific men.

THE PATHOLOGY OF TYPHOID FEVER.

It was supposed when Eberth isolated the bacillus of typhoid fever that the pathology of this disease was plain. The bacillus found its way into the intestine usually through the drinking water and there multiplied, producing toxines which were absorbed, and causing the inflammation and ulceration of Peyers patches. This was supposed to be the chief and all important lesion, other pathological findings being secondary. Sanarelli studying the disease, produced experimentally in animals, came to the conclusion that the seat of the disease is in the spleen and lymphatics; and that there the bacilli multiply and produce their peculiar toxines. To the circulation and elimination of these he attributes the other phenomena of the disease. According to this view the intestinal lesions bear about the same relation to the disease as the eruption of the skin does to small-pox, measles, or scarlet fever. Sanarelli believes, however, that the unusual activity of the b. coli communis which he observed in these experimental cases, may account, in part at least, for the inflammation and ulceration of the intestinal glands. Barbacci's report of six cases of perforation of typhoid ulcer in which this organism alone was found in the peritoneal cavity would tend to confirm this view.

Sanarelli's experiments are open to the objection that typhoid fever produced experimentally in animals does not run the same course and cannot be expected to produce the same lesions as in man. However, recent accurate observations have tended somewhat to strengthen his views. There are a number of cases of this disease reported in which the bacillus typhosus has been found in the spleen and other organs, and the intestinal mucous membrane was normal. The bacilli may be found in almost every organ of the body, but the cases are very rare in which they are not found in the spleen. Any of the important organs may bear the brunt of the disease. The accident of reception and distribution of the bacilli being responsible for their localization, rather than any selective action they may have for any particular organ. Neither clinically nor by macroscopic examination can we exclude this disease, and as Prof. Welsh has said, we are justified in demanding a bacteriological examination of all the organs before excluding typhoid fever.

"CRIMINAL DEGENERATES."

It is a sad commentary upon our boasted civilization and scientific knowledge, that we make so little progress in the satisfactory solution of the problem of the proper disposition of our degenerate criminals. True, it often takes centuries to establish truth upon the foundation of justice along any line. Discussions, "pro and con," must be indulged in, and in the course of time the grand total found, before conclusions are reached.

We are no nearer the solution of the problem than were our early forefathers, and it seems that justice shall never be done so long as ignorant courts are the sole custodians of this matter. It is a scientific question that ought to be passed upon by a board of physicians and alienists. They could, by investigating a case in the light of scientific knowledge, place responsibility where it justly belongs; whereas, at present, injustice is often done, under the system of legal procedures. Often, irresponsible individuals are made to suffer shamefully, through lack of scientific knowledge on the part of our courts, and on the other hand, society is made to suffer by turning loose upon the community a criminal degenerate who ought to be mercifully cared for from a humane standpoint. Nobody is so well qualified to judge the degree of responsibility of a criminal as the scientific physician.

There is certainly some better way of arriving at the truth of this problem than is practiced at present, and a humane way of dealing with these degenerates, after conclusions are reached. The murderer, the thief, the rapist, all come under the same heading, and ought to be dealt with in a different manner from our present mode.

The progress of science has taught us how to deal with our insane, and it stands ready to solve the problem of classifying responsibility, and caring for our degenerate criminals. A step in this direction would be attained in the appointment of a board of physicians to act where the courts were unable to decide cases in which an element of doubt existed. The question is, shall we advance in a manner consistent with other evidences of civilization or remain in a state of barbarism.

"MEDICAL ASEPSIS."

If there is any truth in the theory of asepsis and antisepsis, it applies with equal force in the practice of medicine as it does in surgery. No educated surgeon would presume to operate without first attending to all the approved methods of rendering an operation thoroughly aseptic. It would be a useless attempt to elaborate upon the benefits of modern surgery as compared with that of the past. The truth is fully realized by every educated surgeon in the land; but the practice of medicine needs all the safeguards that can be thrown around it, in order that it may attain to, and maintain, that respect and confidence in its efficiency, that it merits.

New remedies are constantly being added to our therapeutics; old ones relegated to the realms of the obsolete and thus the practice of medicine presents as one great system of empiricism. However pessimistic though our views may be as to the present and future triumphs of medicine, we are forced to acknowledge some great cardinal truths (principles) serving as its foundation.

There is much good that can be accomplished by the careful and intelligent application of rational therapeutics. Any agency employed by the physician for the relief and cure of his patient is properly considered a therapeutic measure. Just here I wish to impress the thought that no agency has more to do with the successful termination of disease than true "medical asepsis." It would be inconsistent for the physician to order the room, bedding and clothing of a patient disinfected and allow that patient to use the same spoons, glasses and graduates for perhaps days without disinfecting them; or, to carefully attend to the patient's immediate surroundings and neglect the water or food supply.

Every progressive physician should attend as carefully to securing medical asepsis as the modern surgeon does in securing surgical asepsis. If better results are had by the methods of the latter, certainly the same efforts are justified by the former.

There can be no question that medical asepsis is one of the agencies of certain results in the field of therapeutics. Furthermore, the best therapeutic agencies are the ingenious employment of placebos, and as these are intended more for their moral effect than otherwise, the careful attention to medical asepsis, will assist largely in the attainment of that object.

BOOK REVIEWS.

A History of Yellow Fever. Origin and Cause. By W. L. Coleman, M. D., Houston, Texas. The Clinic Publishing Co., Chicago.

Since our war with Spain, and especially since the disease has invaded our army in Cuba, the subject of yellow fever has become of great interest. The author of this

little work has had exceptionally fine opportunities for the clinical study of this disease. The volume contains 141 pages and is divided into Part I., Origin and Cause, and Part II. Nature, Anatomical Character, Symptoms, Course, and Treatment. A vast amount of information bearing upon all phases of the malady is condensed into this little volume, the study of which we commend to our readers.

A Text-Book of Practical Therapeutics: With especial Reference to the Application of Remedial Measures to Disease and their Employment upon a Rational Basis. By Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. With special chapters by Drs. G. E. deSchweinitz, Edward Martin and Barton C. Hirst. New (seventh) edition. In one octavo volume of 770 pages, illustrated. Cloth, $3.75: leather, $4.50, net. Lea Brothers & Co., Philadelphia and New York.

The success of Hare's Text-Book of Practical Therapeutics is wonderful and well merited. Seven editions within seven years well shows the appreciation given it by the profession. The work is divided into parts I., II., III. and IV. Part I. considers general therapeutical considerations. Under this head is described the modes of action of drugs, modes of administering drugs, their dosage, &c. Part II. considers drugs. Under this section is given, in alphabetical order, the therapeutics of all drugs in a concise manner. There is no more interesting or valuable section of the work than Part III., which considers remedial measures other than drugs; foods for the sick. Part IV. gives the treatment of all diseases from abortion to worms in alphabetical order. Gives table of doses of medicines; tables of relative weights and measures in the metric and apothecarie's system. Index of drugs and remedial measures and index of diseases and remedies. The volume consists really of two parts, one on drugs and other remedial measures, and the other on diseases. Each of the two parts is written with the other in view, and copiously cross-referenced. The reader desiring to know all the material facts concerning a drug can instantly find the information in the first half of the book with references carrying him to the applications in the various diseases discussed in the second part; or if desiring knowledge concerning the treatment of any special disease, he can quickly find it under the alphabet of diseases, with full therapeutical directions and prescriptions for various stages and complications, and references to the first part where all details concerning the individual drugs are given. Dr. Hare's text-book has no rival, and we take pleasure in highly recommending it to the profession. The work is handsomely bound and beautifully printed.

Diseases of Women. A Treatise on the Principles and Practice of Gynecology. For Students and Practitioners. By E. C. Dudley, Professor of Gynecology, Northwestern University Medical School, etc. Lea Brothers & Co., Philadelphia and New York. 1898.

As a gynecologist and teacher of wide experience, Prof. Dudley is peculiarly qualified for the satisfactory performance of the last feature outlined in his preface, viz: the presentation of a treatise on gynecology for the use of practitioners and students. He has made his text direct and clear by the selection of those measures, which, in his judment are most useful, the inclusion of the most approved principles and practice and the exclusion of whatever is not founded in pathology or carefully observed experience.

The work is divided into five parts, as follows: I. General Principles; II. Inflammations; III. Tumors; Malformations and Tubal pregnancy; IV. Traumatisms; V. Displacements and Pelvic Massage. In Chapters 4 and 17 the value of routine typical applications which are commonly and extensively employed in office practice is clearly described.

The relations of dress to the health and diseases of women are briefly summarized in chapter 9; the subject is deemed urgent. Pelvic Massage, after the Brandt method is set forth in the closing chapter. The book is, in every sense, one to be highly commended to students and practitioners. It contains many very fine illustrations and from a mechanical standpoint it has no superior.

A Guide to the Clinical Examination and Treatment of Sick Children. By John Thompson, M. D., Extra Physician to the Royal Hospital for Sick Children, London, Lecturer on Diseases of Children, Edinburgh School of Medicine. In one crown octavo volume of 350 pages, with 52 illustrations. Cloth, $1.75, net. Lea Brothers & Co., Publishers, Philadelphia and New York.

The author states in the preface that the scope of this work is essentially supplementary. It supplies to practitioners and senior students, practical and useful information which taken along with that contained in a text book on practice of medicine, will be a help to them in the study and treatment of sick children.

The work contains 336 pages and the au-

thor has properly approached his subject through the field of clinical medicine, in recognition of its rational relationship with other human affections and the advantages of so regarding it. He points out the initial difficulties, and encouragingly assures his readers that when once they are surmounted practice among children is at least as easy as among adults. The work is a good one, and the physician and student will find it full of interesting and valuable information.

A Text Book upon the Pathogenic Bacteria for Students of Medicine and Physicians. By Joseph McFarland, M. D., Professor of Pathology in the Medico-Chirurgical College, Philadelphia, etc. Second Edition, Revised and Enlarged. Philadelphia. W. B. Saunders, 925 Walnut St. 1898.

This is a very valuable book. It conveys to the reader a concise account of the technical procedures necessary in the study of bacteriology, a brief description of the life history of the important pathogenic bacteria, and sufficient description of the pathological lesions accompanying the micro-organismal invasions to give an idea of the origin of the symptoms and causes of death. In this, the second edition, new chapters have been added, dealing with the bacteriology of whooping cough, mumps, yellow fever, hog cholera and swine plague; describing the bacillus also. Gives capsulatus and the proteus vulgaris; and describing the methods of determining the value of antiseptics and germicides, and of determining the thermal death point. This book will not only find its sphere of usefulness in the hands of medical students, but its pages will be found to contain much that will be of interest and profit to those practitioners of medicine who graduated before modern science had thrown its light upon the etiology of disease. The illustrations are superb. It is beautifully printed and handsomely bound. We heartily recommend the work to our readers.

Atlas of Syphilis and the Venereal Diseases, Including a Brief Treatise on the Pathology and Treatment. By Prof. Dr. Franz Mracek of Vienna. Edited by L. Bolton Bangs, M. D. Philadelphia: W. B. Saunders, 925 Walnut Street. 1898. Price, $3.50 net.

This book will prove a thoroughly practical manual for the every day use of the practising physician. The greater portion of the work is devoted to illustrating the varied and numerous forms of syphilis by the most excellent colored plates. On one page will be given a short description of a certain form of Venereal Disease, and on the opposite page is given the picture of the disease described, which makes the description much clearer. The last 115 pages of the work is devoted to a general description of Syphilis, its history, mode of contagion, varieties and treatment. A few pages at the close is given to the subject of Gonorrhœa, with its treatment. A good index closes the volume. The work properly studied will be of very great value and aid to physicians. These atlases are well printed and bound, and present a very desirable volume.

Atlas and Epitome of Operative Surgery. By Dr. Otto Zuckerkandl. Edited by J. Chalmers DaCosta, M. D. Philadelphia: W. B. Saunders, 925 Walnut St. 1898.

In this atlas the author has laid down the rules and methods of surgical procedure with the clearness that springs from definite knowledge and the emphasis that is born of conviction. He describes lucidly and tersely the operations of modern surgery, and in a manner that fits the book to be a guide to the surgeon who operates upon the living, or to the student who works upon the cadaver, the verbal descriptions being reinforced and illuminated by a large number of excellent original cuts. Not only will this work be of great service to the student, but its help and aid to the physician cannot be estimated. It not only tells him how to do any and all kinds of operations, but performs them before his eyes. We commend the volume most highly.

A Country Doctor. By Thos. Hall Shasted, M. D., Battle Creek, Mich. 1898. Published by the Author.

This little volume describes the life of a country doctor in a most pleasing and entertaing manner. It contains many nice cuts of the doctor in his rig, by the bedside and many other scenes incident to a doctor's life.

Infallible Logic. A Visible and Automatic System of Reasoning. By Tho. D. Hawley, of the Chicago Bar. The Dominion Company, Chicago, Ill.

This book describes a new system of logic by which reasoning can be carried on by an infallible process. All the implied meanings of sentences and of collections of facts, can be as infallibly and easily determined, by this new method, as the interest on a promissory note can be ascertained by mathematical rules. The new system is based on axiomatic principles and governed by infallible laws. Its methods consists in the repeated use of a few processes which are performed in a mechanical manner, and

the results appear automatically. It is easy to learn, and probably the time is not far distant when it will take the place of the syllogistic and algebraic systems of logic now in current use. The work contains 659 pages, is well printed with a first-class leather binding.

SAMANTHA AT SARATOGA, or "Racing after Fashion." By Josiah Allen's wife. New York: Hurst & Company, Publishers.

This little volume contains 372 pages and is full of amusing incidents and many funny illustrations. It is very interesting and entertaining.

TRANSACTIONS of the Medical Society of the State of New York for the year 1898. Published by the Society. 1898.

The volume of transactions of this Society is always full of good things, and the present one is no exception to the rule. It contains a great many most excellent papers and able discussions. These transactions always appear promptly, well bound and neatly printed, and appears to try to outdo itself every year in the excellence of its work and the method of its presentation. It makes a most creditable volume for the library.

LITERARY NOTES.

LIPPINCOTT'S MAGAZINE FOR SEPTEMBER 1898.—The complete novel in the September issue of Lippincott's is "The Touch of a Vanished Hand," by the late Miss M. G. McClelland. Its action occurs mainly in Virginia, and partly in eastern New York during the French and Indian war of 1755.

"The Cromwell Case,' by James Raymond Perry, deals with the unravelling of a supposed murder. Henry Holcomb Bennett, in "A Charge in the Dark," describes an experience of the National Guard which resembled actual war. The "Grandpap" of Anna Vernon Dorsey's tale was a colored boy, on whom cares and labors too heavy for his years were laid.

Felix L. Oswald writes of "War Hysterics" (the superstitions and bigotries that attend hostilities), and Frances M. Butler of "War Songs," handling the theme historically. "Monarchies and Republics" are considered by Frederic M. Bird, with special reference to our relations with England.

"New York in the seventies" is a previously unpublished chapter from M. E. W. Sherwood's recollections. The "Three Beaux" whose memory is revived by Frank Norman are Brummel, Nash, and Fielding. Gabrielle Marie Jacob writes of "The Time of Reaping," with harvest festivals and the like in various lands and ages.

"Jaques"—the melancholy Jaques of "As You Like It"—is the subject of a careful study by E. R. Larrison. The "Chronicles of an Unsuccessful Author" (naturally unsigned) record an experience far from solitary.

The poetry of the number is by Mary E. Stickney, Charles G. D. Roberts, and Edward Gilliam.

THE AUGUST FORUM.—It is a long time since The Forum has had a number so varied and generally interesting as that for August. The topics range from the Spanish War to Spiritualism; and, without exception, the authors writes with the force and freshness of men who are thoroughly interested in their subjects. The table of contents is as follows: "The Spanish War and the Equilibrium of the World," Brooks Adams; "The Anglo-American Commission," Edward Farrer; "Austria-Hungary Under the Reign of Francis Joseph"—(second paper), His Excellency Albert von Schaffle; "New Constitutional Amendments," James Schouler; "The Development of the Policy of Reciprocity," Hon John Ball Osborne; "The Future of Great Telescopes," T. J. J. See; "Our Need of a Permanent Diplomatic Service," Hon. George L, Rives; "How a Savage Tribe is Governed," Major John W. Powell; "The Repetition of History in Our War with Spain," S. Leonard Thurlow; "The Problem of Immortality: Some Recent Mediumistic Phenomena," Jas. H. Hyslop; "New Trials for Old Favorites," Prof. Brander Matthews.

The American Monthly Review of Reviews for September presents the usual timely features that we have come to expect from this magazine. The various events connected with the end of the war with Spain are fully discussed by the editor, while the Porto Rican campaign, from start to finish, is described by John A. Church, formerly of the Army and Navy Journal. The cost of the war and the financial provisions for meeting it are ably summed up by Charles A. Conant, an experienced financial writer. Henry Macfarland, a Washington journalist, contributes a character sketch of William R. Day, the Secretary of State, which is of special interest at this time because of Judge Day's appointment as leading member of the

American peace commission. Charles Lowe, the English biographer of Bismarck, and W. T. Stead furnishes a rich fund of anecdotes regarding the late ex-chancellor. Aside from many other illustrations, numerous cartoons apropos of the war are reproduced from home and foreign journals.

The war articles in the September Scribner's are led by Richard Harding Davis's account of "The Rough-Riders' Fight at Guasimas." There is no information at second-hand in this article; Mr Davis was in the thick of the fight and writes of what he saw. When he crushes, once for all, the story of a surprise, he does it with positive knowledge of the previous orders given and received by Gen. Wheeler and Col. Wood. The conversations he had with the men in the fight are vivid bits of dramatic dialogue. The whole article is the fullest as well as the most thrilling account of the Guasimas fight yet published, and will stand as the historical picture of that famous event. The illustrations give many of the best known men in the Rough Riders, and views of the country over which they fought. There are also drawings from life by the artist H. C. Christy, who was there.

Dr. Moritz Busch, who has been sometimes described as Bismarck's Boswell, and who enjoyed terms of special intimacy with the great Chancellor, is the author of an important paper on Bismarck and William I., which will be published entire in The Living Age of Sept. 3. It was written with a view to publication after Bismarck's death and it contains so much that was communicated to the author by Bismarck himself that it is almost autobiographic.

MISCELLANEOUS.

The Effects of Exercise on the Hemoglobin, with Reference to the Value of Rest in the Treatment of Anemia.

Dr. Wilfred Edgecomb, (British Medical Journal of June 25, 1898) summerizes a valuable paper on this subject, as follows:

1. There is a normal day and night rise in the worth of the corpuscle, representing a daily destruction and regeneration of hemoglobin. 2. Active exercise increases the extent of the fall and night rise. 3. Active exercise stimulates a slight overproduction of hemoglobin. 4. Passive exercise (massage) diminishes the volume of the blood. but has no effect in diminishing or increasing the amount of hemoglobin. 5. Rest reduces the extent of the day fall in worth, representing a diminished destruction of hemoglobin.

The bearing of these facts on the treatment of anemia is obvious, providing as they do a physiological foundation for the well known value of rest in bed in the treatment of that affection. Inasmuch, however, as the effect of exercise is to stimulate the production of hemoglobin, while that of rest is to lessen its destruction, it may be objected that the conclusions to be drawn from these data are in mutual contradiction. It must be borne in mind, though, that the observations were made on normal subjects in whom the temporary increased destruction of hemoglobin brought about by exercise is fully met and repaired by increased formation. To complete the investigation it is necessary to determine by diurnal observation of the blood of an anemic subject taking considerable exercise, whither the reproduction of the hemoglobin would be sufficient to make good the loss occasioned by exercise. The undesirability of keeping a patient sufficiently long under observation without treatment has prevented the writer examining this point. From clinical experience we may infer with tolerable certainty that construction would fall short of destruction, or at least would not be in excess of it as is the case in health. In other words, that the already seriously diminished amount of hemoglobin would be unable to respond to the call made upon it by exercise, so that gradually the total amount would be further lessened. Rest, on the other hand, by removing the drain would enable the constructive process to exceed the destructive, and the store of hemoglobin to be gradually built up.

The Value of Jambul in Diabetes Mellitus.

Dr. Hare in one of his recent editoral articles discusses this subject as follows:

The fact that diabetes mellitus is in some cases a hopeless disease against which both physician and patient struggle without effect causes to be continually on the lookout for some remedy which can be considered a specific, it being forgotten in many instances that in all probability diabetes is but a manifestation of a series of lesions rather than of a single pathological condition. Recently in the January issue of the Indian Medical Gazette Dr. Macphail speaks in a laudatory way of the influence of jambul in the treatment of this malady, although he admits that the patients return to say that while it temporarily relieved them, in many instances the symptoms recurred. In the same journal for March, 1898, Mitra, of

Kashmir, in writing about Dr. Macphail's contribution, points out that this drug was first recommended by Banat Walla, whose experiences were recorded, and by Quantjer, of Batavia, and that in the Practitioner for January, 1891, Kingsbury and Mahomed published favorable results in isolated instances from its use; so, too, Lewischen in the Berliner Klinische Wochenschrift of February 23, 1891, and Dujardin-Beaumetz in the Bulletin de Theraputique for March, 1891, considered that this remedy in combination with a strict diet was useful in mild cases but useless in severe ones, which is practically equivalent to saying that it is of no value at all, for every one knows that in mild cases dietetics should be given nearly all the credit for any improvement.

Mitra tells us that a careful analysis of a large number of cases in India in which this drug has been tried under the most favorable conditions, the seeds being fresh, shows that it has no claim to be considered a cure for diabetes. He thinks that given a case of ordinary diabetes it may be well to try the fresh seeds with a strict dietary for a short time, and then if no value results we should cease its use at once.

These conclusions reached by Mitra are in accord with our own. In the few instances in which we have given this drug it has failed to produce any material influence.

The Bacterium Coli Commune as a Causative Factor in Puerperal Fever.*

Schenk says that for a long time it has been known that the colon bacillus may become a very virulent pathogenic agent. It is thus that it may become a cause of puerperal fever, either alone or associated with other germs such as streptococcus, staphylococcus, gonococcus and anerobic germs. Fraenkel has reported two cases of puerperal fever from the colon bacillus. Budin reported one case that was investigated bacteriologically by Chantemesse, Widal, and Legry, in which the colon bacillus was found in the uterus, in the peritoneal cavity, and in peri uterine abscess. Franque, in eleven women suffering with puerperal fever, found the bacterium coli in the lochia of one. Guebhard cites six cases of physometra, in all he was able to find the colon bacillus in the amniotic fluid. Ahlfield and Eisenhardt have found the bacterium coli commune as an agent in puerperal fever associated with streptococcus. Kroenig, in one hundred and seventy-nine cases of puerperal endometritis, found the colon bacillus five times. In twenty-one febrile women, of whom he examined the amniotic fluid, he found the colon bacillus four times.

Schenk himself has observed two new cases of puerperal infection from the colon bacillus, in one the bacterium coli was found in a pure state, in the other it was associated with the streptococcus. In reply to the question, how it gets there, he says, it can pass directly from the intestine into the peritoneal cavity, but in these cases there exist already previous intestinal lesions and intestinal adhesions. More often the colon bacillus comes from the rectum or the ureters, penetrating into the vagina and uterus. The prognosis in puerperal infection from the pure colon bacillus is less grave than streptococcic infection. Often, then, one has a puerperal endometritis without extension to the peritoneum or parametrium. In mixed infection with the colon bacillus the prognosis depends upon the nature and virulence of the associated germ.

*Abstract in Medical Review.

The Dangers of Certain Faulty Impressions Regarding the Menopause,

Dr. P. A. Harris presented a paper with this title at the New Jersey State Medical Society, June 28, 1898. He said:

This usually occurs between the of 40 and 50 years. It is not attained by all in the same manner. Two-thirds skip one, two or three periods for a longer or shorter time prior to cessation. The rest stop suddenly. The average time for this large class to menstruate irregularly is two and a half years. To aid in judging as to what is physiologic and what pathologic we must learn the previous habits of the patient. When we find the lengthened period and flow markedly out of proportion to her habit, we will be warranted in assuming that a pathologic condition is present. Endometritis, small myomata, the forthcoming cancer, were doubtless the pathologic causes of the floodings observed. The profession and the laity still have incorrect impressions as to the menopause. Even Tilt regarded as connected with the change many things observable constantly under other circumstances. These are merely coincidents. I believe insanity and melancholia may be a result. Leucorrhea and painful menstruation should not be credited to it. These disturbances may often be readily relieved. The uterus is a pocket, its cervix a sinus, and when once well inoculated with pyogenic tubercule, etc., it is common for the disease to extend to the fallopian tubes, producing pelvic pain, backache, fever, headache, yet neither of these may be sufficient to cause all so affected to apply for relief. If a patient is nearing the age when

the menopause is expected, if she skips a period, has a leucorrhea, etc., she is apt to regard it as the change. Usually her physician agrees with her, orders some slight treatment, and she returns later with an increase of the symptoms. He then makes a physical examination and may at once discover an unmistakable carcinoma. The question of operation occurs, but the case is made worse by the delay or neglect; thus, constantly, carelessness causes injury and perhaps loss to the physican. Often, on the other hand, the woman is led astray by her friends, who view all such matters in the light of the change and believe that all will soon come right. Here the delay is the result of the common belief that so many things are due to the change. After carcinoma, the most common trouble is the development of uterine fibroid or myomata. Even small fibroids are often dangerous to neglect, producing emaciation and an appearance as of carcinoma. The expectant treatment must here be abandoned as a cure is almost sure to follow the proper treatment. There is little in the change of life to affect a woman so as to produce serious pathologic conditions. Such may coexist, but are not in relation as cause and effect. In all cases we must make particular inquiry and physical examination; never let the nearness of the menopause influence the opinion to the neglect of every precaution. It is important to detect cancer early. Remove such and the mortality will be largely reduced. While late operation often results in good, yet we have no right to expect it. We should not depend solely upon the fingers, eyes, etc., but use the microscope. Let us then remember that the menopause of itself has little if any effect in either precipitating or arresting the more serious diseases of the pelvic organs; that many of the pathologic conditions are inaugurated and maintained with little regard to that special period in the life of females when the phenomena of ovulation and menstruation are preparing for their final adieu.

Importance of a Knowledge of Tropical Diseases.

Dr. P. Manson, at the recent meeting of the British Medical Association, discussed this subject. He said:

Many of the so-called tropical diseases are absolutely restricted to tropical latitudes and in their native haunts assume phases peculiar to that climate. Many of these countries are not only teeming with an immense native population, but are also being rapidly invaded by the Caucasian race. The importance of this subject can scarcely, therefore, be overestimated. The extensions and progress of this branch of medicine during the last twenty years, more especially since Laveran's discovery of the malaria parasite in 1880, have been so great that the study of tropical medicine has become a life's work in itself. Every year the volume of discovery increases, new fields of inquiry are being constantly opened up and the pathological fauna and flora are found to be infinitely more numerous than their congeners of cooler climates. As a special tropical section we have three distinct functions to fulfil. In the first place, we must work for the affiliation and organization of the five or six thousand British practitioners who more or less directly are interested in tropical practice. Five or six thousand is a numerous body; such is its magnitude, however. Secondly, we must insist that those who propose to join our ranks in the future are properly educated in our special branch. We all of us feel acutely the backward state of our educational system in its bearing on tropical medicine. There is not one of us who can not pillory himself with the recollection of lives that perished, entirely owing to the lack, on our part, of the elementary knowledge of tropical medicine. Lastly, we have to discuss the problem of tropical disease. That which has been accomplished has but served once more to show that there is no finality in research; the higher we rise the wider becomes the horizon. Laveran's discovery has illuminated many things that were dark before, but it has also opened out new problems and shown dark spots of ignorance hitherto unsuspected. Beyond that which Ross has just told us, we still know absolutely nothing of the malarial parasite as it exists outside the human body. Similarly, we are still in absolute ignorance of the location and of the physical features of the malaria parasite while latent in the human body, or of the exact physical conditions that cause it, after months, or even years, to spring once more into active pathogenic life.

That other great tropical diseases, or rather group of diseases, which we call dysentery, is still, as regards many of its forms, their causes, and their treatment, a sealed book. The pathology of liver abscess is still, as it has ever been, *quaestio vexata*. We just begin to know a little about the symptoms, epidemiology, and pathology of beri-beri; we do not know its cause. There is plenty of work for us to do. These are not a tithe of the problems in tropical pathology calling for our consideration. In all pathology there is no such field for fruitful, original research and discovery as tropical medicine.

A Curious Case of Epistaxis.

Editors of The Charlotte Medical Journal:

In looking over some of my old Journals I noticed an extract in the July number for 1896, "A curious Case of Epistaxis."

As the author had seen no other similar case, I send you a report of one that occurred in my practice about a year ago.

Patient, a stout negro woman, about 50 years of age. She had never been troubled with previous attacks of epistaxis. The bleeding commenced in the afternoon and continued until I saw her, which was near midnight. A cotton tampon was placed in the anterior nares, and then bleeding began simultaneously from the posterior nares and both lachrymal canals.

The blood trickled freely over both cheeks for at least half an hour, when it ceased, after the posterior and anterior nares had been plugged. The plugs were removed thirty-six hours later and no cause for hemorrhage could be found.

T. C. Gibson, M. D.

Winston, N. C.

Cholecystotomy for Occlusion of the Ductus Communis Choledochus; Removal of a Stone.

At a recent meeting of the Alumni Association of Bellevue Hospital Dr. J. F. Erdmann reported the case of Mrs. S., thirty-three years of age, robust physique, and had an excellent family history. With the exception of a few days in bed after a birth a few years ago, she had not had a day's confinement to the house as a result of illness until the present trouble which had begun on January 17, 1898, by an attack of rather moderate pain located in the epigastric region and accompanied by nausea. This had disappeared in four days under some mild treatment. Then she had enjoyed perfect health until the first of March, on which day her family physician, Dr. V. Piatti, of Greenwich, had been called in, and had found her suffering with the same symptoms as before, and with pain under the left scapula and in the region of the spleen. Two days later she had shown evidences of jaundice, and this had gradually deepened to a mahogany color. On March 9th, or the ninth day of the disease, she had a temperature of 103 degrees, F., without any previous chill, and a pulse of 132, and had become nervous and restless. When seen by the speaker on the following day, at 11 a. m., she had a temperature of 99 degrees F. and a pulse of 108, and, in addition to this change for the better, her atttendant, a woman of considerable intelligence, said that she had observed that the patient was not so dark as she had been in the earlier part of the illness. As a result, it had been thought best to keep her under observation for a few days before operating, although up to that time there had been no evidence by the stools of bile entering the intestine. On the following day the temperature suddenly rose to 105 degrees F. and the pulse to 132, and she had chills the entire day. When she was seen again, on March 12th, the temperature was 103 deg's. and the pulse 140 to 150, and there was no diminution in the discoloration or evidence of bile in the stools. Immediate operation was decided upon and, with the patient under ether, an incision was made in the outer border of the right rectus muscle. There was no difficulty in finding the empty and contracted gall bladder, but numerous bands and a mass of adhesions had to be torn through before the lesser omentum and the opening of Winslow were reached. When this had been done a mass of about the size of an English walnut could be felt. Thiswas suspected to be inflammatory rather than malignant. Careful and prolonged search in this mass failed to detect a stone, and consequently the obstruction was considered to be the result of causes external to the duct—i. e., the mass of tissue. As it seemed advisable to relieve the pressure as much as possible, and as there was not enough working space, an incision was made at a right angle to the primary one, cutting through the rectus on the right side and partially through that of the left. A careful search then revealed a hard body, at the intestinal end of the mass previously found. This proved to be a stone situated at the beginning of the common duct and at the terminus of the cystic and hepatic ducts. By the use of considerable force the stone was dislodged upward through the cystic duct into the gall bladder. Owing to the patient's condition and the difficulty in bringing the gall bladder to the parietal peritonæum, it was decided to simply incise the gall bladder after first packing the area about it with protective gauze. After this had been done, the stone was easily removed. A forceps was attached to one of the edges of the incision in the gall bladder, and then gauze was packed under the handles of the forceps so as to bring the gall bladder as near as possible to the parietal peritonæum. A small drain was put in the gall bladder and the wounds were sewed up. Within two minutes following the removal of the stone there was quite a flow of bile and mucus from the opening in the gall bladder. The patient was in very poor condition at the close of the operation, having a pulse

of 200 and evidences of pulmonary œdema. She responded to strychnine hypodermically, and upon the following day her temperature was normal and her pulse 120. The discharge of bile was so profuse that frequent dressings were necessary throughout the day. The second day following the operation the stools were found to have bile in them, and on the fourth day the forceps and the drains were removed, but an abdominal drain was introduced. From this time there was no evidence of bile by the stools for three weeks, but an exceptionally large amount came through the opening in the abdomen. This obstruction to the ducts was finally ascribed to the drain, as it was suspected by the family physician that he had been putting the gauze in rather tight. This proved to be the cause, for, after placing a small drain in the opening, bile was again found in the stools. Within a few days the drain had been dispensed with, and this had been by a rapid closing of the fistula, so that the entire wound was healed on April 18th. The skin discoloration disappeared in five weeks, and the patient had been allowed to go about since April 20th.

Development of the Special Senses.†

All observers upon the mental condition of children agree that most of the special sensations are almost absent at birth, and develop rather slowly during infancy. It is certain that the infant at birth is quite unable to see. Impressions made upon the retina seem to be so vague as not to enter into the consciousness of the child. It would seem that few children recognize objects by sight before the end of the first month. Ideas of distance do not develop until a considerably later period. The child may be frequently seen to grasp at objects far beyond his reach, and he is usually very slow in learning to judge of comparative distances. Color blindness is the normal condition of an infant. While bright colors will attract the eye of an infant, he does not learn to distingnish them so that he can pick them out with certainty until after the end of the second year.

Hearing also is very slow in its development. It seems probable that the new-born infant does not actually hear sound. Certain sounds, like the slamming of a door, may cause the child to start, but he evidently *feels* them rather than *hears* them. Localization of sounds develops to a certain extent very early in some children. By the tenth week they have been observed to turn the head in the direction of a distinctive sound. The child learns very early, in limited degree, to understand the meaning of certain sounds. Hearing being one of the earlier of the senses in its development, and the child being so dependent upon it, the backward mental condition of the congenitally deaf child is readily appreciated.

†Abstract of Editorial in Archives of Pediatrics.

The Causes of Drunkenness among Women.

In giving evidence before the Liquor Commission, Dr. Lawson Tait drew a marked distinction between drunkards of the two sexes, and said that a drunken woman required special treatment.—The Hospital, July 16, 1898. Almost without exception, he had been able to trace the cases of female drunkenness to physical or mental suffering. Female drunkards occurred, he said, in all classes of society, even in the highest, and in analyzing a set of 108 cases, he found they fell into two groups—(1) a small one of twelve persons, having an average age of 26, and (2) a large one of ninety-six, with an average age of 48—and he drew the conclusion that the suffering due to the change of life was the cause of the second group, and that when the period was passed the tendency ceased. He thought also that in the first group the drunkenness was due to physical suffering, and that when the cause was removed the drunkenness diminished. To treat such cases, then, in inebriate homes was fundamentally wrong in the case of women; nay, he went further, saying that complete deprivation of drink should not necessarily be a part of their treatment, and that alcohol should rather be used as an article of diet to help them over their trouble. That the pains and "sinkings" felt by many women in response to disturbauces of uterine and ovarian function very commonly lead them to habits of alcoholic excess no one can doubt, but neither can we doubt that, in the presence of these distressing sensations, the tendency to give way to the temptation is much increased by the facilities offered for obtaining drink, so that we can hardly agree that the abolition of these facilities, grocer's licenses, etc., would be quite inoperative in stopping the evil, although we may admit that, when once a woman has given way to the habit, the drying up of one source of supply is not at all likely to check her downward progress. Without doubt the proper thing is to remove the cause of the craving. We must not, however, be too sure that a habit will be stopped by the removal of the cause of its beginning. The removal of the temptation to its continuance is likely also to be of use.

The Urine of the Malarial Fevers.

The Journal of the American Medical Association, Aug. 20, 1898, in its editorial columns contains a few comments on this subject that are practical:

Even when no specific action of the causal factor of this disease is exerted upon the kidneys, the urine of malarial subjects varies somewhat with the type of infection, whether regularly intermittent or æstivo-autumnal, as well as remaining to a certain degree subservient to physiological influences, as amount of fluid ingested, season, climate, time of day, and the other usual considerations. In not a few cases, however, and it must be confessed that these are almost universally of the æstivo-autumnal variety, the kidneys suffer severely, either in the production of an acute nephritis, or in the hæmoglobinuria of pernicious ague, or both. Again, a former attack or attacks of ague may have gradually produced a chronic nephritis, upon which an attack of pernicious æstivo-autumnal fever has engrafted an hæmoglobinuria, as in the case reported by Brown ("Malaria;" report of twenty-eight cases), in which granular and epithelial casts were found in addition to red corpuscles and "shadows;" the specific gravity in this case averaged 1010:

Let us first take up the urinary changes present in the average number of ordinarily severe cases. The daily amount varies as to whether a paroxysm has occurred on the day in question or not, for at the beginning of a paroxysm it frequently happens that a considerable amount of urine is passed. The quantity also varies with the type of infection; in the regularly intermittents it is somewhat increased, while in the æstivo-autumnal infections, when they cause a fever almost continuous in its action, the urine, as in all continued fevers becomes diminished. When convalescence is established, usually several days after the last chill, a slight polyuria is often manifest; this rarely exceeds four pints and may last a few days or weeks, depending as a rule on the severity of the attack. As regards acidity, one would naturally expect that in fevers, concentration of the urine, other things being equal, would increase the acidity. This is true in the malarial fevers, except in cases of the æstivo-autumnal type, where the urine is not altered in this regard. The color varies greatly; where fever is present it is high, and the higher the fever the deeper the color. This fact depends upon two causes: the concentration that occurs in all febrile processes; the chill with subsequent fever is coincident with the destruction of large numbers of red corpuscles and at that time a large amount of pigment transferred hæmoglobin, is set free in the blood, to be immediately taken up by the leucocytes; while a part of this pigment is deposited in the various organs, especially the liver, no inconsiderable amount finds its way to the kidneys and appears in the urine as urobilin, which substance itself would lend deep coloring to the urine. Some cases of malaria show a jaundice more or less marked; this may vary from the slightest perceptible tingeing of the conjunctivæ to a deep yellow, the very dark colors so characteristic of obstruction never occurring in uncomplicated cases. This jaundice is always remotely hæmatogenous, a greater number of red corpuscles being destroyed than can be elaborated by the excreting organs; it occurs, as a rule only in the severer cases, usually æstivo-autumnal in character, cases in which not infrequently hæmoglobinuria has supervened. In such instances bile coloring matter may be proved to be present in the urine by means of the ordinary nitric acid contact test.

As stated above, the jaundice is only remotely hematogenous; that is to say, it only primarily depends upon the destruction of the red corpuscles. The pigment is in large part carried to the liver and a great increase in the secretion of the bile occurs, so as to rid the overcharged system of as much deleterious matter as possible. Indeed, the secretion is often so great that all can not be disposed of through the excretory ducts; a backward pressure then occurs and reabsorption, with the production of jaundice, readily follows. In the icteric attacks bile is not very apt to be in the urine, as the kidneys very probably are able to transfer into urobilin some of the biliary compounds. It is only when the latter are in great excess that the presence of bile can be proven. As in other febrile affections, with a diminished excretion of fluid from the kidneys, there is a normal or increased amount of solids, so that during the paroxysms the specific gravity is increased, while in the intervals it is diminished, so that the total amount passed maintains a fairly good average, from 1045 to 1018. When infection is from the estivo-autumnal parasite, and the attack of sufficient severity to cause a continuous fever, the specific gravity, of course remains permanently high. As concerns the various normal ingredients of the urine, urea and uric acid are increased as are the various salts, phosphates, chlorines and sulphates. The striking feature about this increase is that it is specially manifest during the post malarial stage, the period of polyuria.

Another point of interest in the solid constituents of the urine is the amount of

iron. This is augmented in any febrile disease, but more so in malaria than in any other. The increase is particularly liable to be noticed after a paroxysm, and is undoubtedly dependent upon the excesssive destruction of red corpuscles. The sediment of malaria is unusual from but one standpoint and that is best brought out by the use of the centrifuge; the presence of black pigment occasionally of such quantity as to produce a heavy deposit in the bottom of the tube as in the case reported by Forchheimer. Among abnormal ingredients that might appear the first place must be allotted to albumen. In all febrile affections a varying proportion of kidneys suffer, some from temporary changes, as manifested by the presence of albumin and casts which gradually disappear after the cessation of the original disease; while others are the subjects of acute inflammatory processes which do not answer readily to treatment and which finally become chronic. In such a disease as the one under consideration, where specific organisms are present in the blood, naturally the delicate epithelial structure of the kidney would be almost certain to sustain some damage. Such, indeed, is the case here, and a large proportion of malarial infections show a slight amount of albumin with an occasional cast, usually hyalin. It is rather remarkable that under the provocation present an acute nephritis is of such uncommon occurrence. Probably of more consequence than the parasites in the production of inflammatory nephritic changes, is the irritation of the large amount of pigment set free in the blood and excreted, at least to some extent, by the kidneys, as shown by its appearance as a sediment and chemically by the increase in iron salts. A well known law of pathology tells us that slight irritation continued over a considerable length of time will inevitably result in the presence of new-formed connective tissue, which new-formed tissue will, in the course of time, mort surely undergo cicatricial contraction. Many cases of malaria, especially in the more southern latitudes where the estivo-autumnal parasite plays the leading role, are the subjects of changes in the kidneys, of a chronic inflammatory type, interstitial nephritis, as evidenced by increased secretion of urine, pale color, low specific gravity, and the presence of a small amount of albumin, with granular casts, even when the blood at the time of examination shows the patient to be free from active infection. This change is possibly due to the constant irritation of the pigment, and has been demonstrated in individuals, the victims of paludism, in whom a possible alcholic etiologic factor can be positively excluded. The subject of malarial hemoglobinuria, while of great practical importance, is not of common occurrence, and is more properly treated under a separate heading.

Influence of Abdominal Massage upon the Secretion of the Gastric Juice.

Reed, according to the Medical News, regards with favor massage especially deeply administered (*petrissage*) in persons suffering from gastric disturbances with lack of sufficient gastric juice or lack of muscular power. Massage increases the tonicity of the muscles of the exterior abdominal wall, as well as that of the muscles of the stomach and intestines, and it has besides an undoubted effect upon the glandular action of these organs. In some cases of chronic gastric catarrh the amount of free hydrochloric acid was finally restored under an energetic treatment by massage and galvanism, together with the administration of pepsin and hydrochloric acid for long periods—six months or less—with lavage for a shorter period. The conditions under which massage of the abdomen has been found in the writer's experience particularly useful are: (1) Chronic gastritis in all its forms excepting those accompanied by hyperchlorhydria. (2) Anacidity or subacidity, except when dependent upon acute gastritis or carcinoma. (3) Gastroectasia, not dependent on cancer. (4) Atonic conditions of the stomach walls, whether progressed to the stage of dilatation or not. (5) Displacements of the various abdominal organs including: (*a*) Gastroptosis; (*b*) nephroptosis, except in cases where the displaced kidney has become excessively tender on pressure; (*c*) enteroptosis. (6) Chronic intestinal catarrh, not complicated with deep ulceration. (7) Dilatation of the intestines. (8) Constipation from unknown causes. In many such cases massage often succeeds. (9) In a group of symptoms which comprise especially tenderness over a region three or four inches in diameter including the umbilicus as its center and a marked pulsation of the abdominal aorta in the entire epigastric region. These symptoms have been assumed to denote congestion of the solar-plexus. They are often met with in practice and may be the result of auto-infection from the gastro-intestinal tract. They are usually benefited by gentle kneading of the abdomen in connection with careful attention to diet. The following are the principal contra-indications for massage of the abdomen: 1. Ulceration in any part of the stomach or intestines. 2. Cancer of any of the abdominal

organs. 3. Acute inflammation in any part of the gastro-intestinal tract. 4. Hyperchlorhydria. 5. Prolapsed kidneys which are acutely sensitive to palpation. 6. Aneurism of any of the abdominal or thoracic arteries. 7. During the menstrual period, when the flow is excessive, or when there is a tendency to menorrhagia. 8. In fatty degeneration or marked dilatation of the heart and advanced phthisis, especially with a tendency to hæmoptysis, abdominal massage should be practiced—if at all—with much care and gentleness.

The Statistics of Exophthalmic Goitre.

Eshner, in the International Medical Magazine, publishes a short contribution to the statistics of exophthalmic goitre, based upon the analysis of 227 cases. 185 were females, 42 were males (4.4 to 1). The oldest female case was 68, the youngest 16. The average age of all was between 30 and 31 (in 212 cases 30.33 years). The conclusions formulated by the writer are as follows:

1. That exophthalmic goitre occurs approximately 4.5 times as often in females as in males among all people. 2. That the disease is most common during the period of active adult life, occurring earlier in females than in males. 3. That the disease is uncommon, if not rare, in the black race.

Referring to the surgical treatment of exophthalmic goitre, Jonnesco (Presse Medicale, October 23, 1897,) critically reviews the various surgical methods employed, and gives a detailed description of an operation for removing the entire cervical sympathetic. He states:

1. That in true exophthalmic goitre surgical interference is both dangerous and ineffectual. 2. Simple section of the cervical sympathetic is useless, though partial resection, including the first two ganglia, may give lasting results. 3. The operation of selection is total and bilateral resection of the cervical sympathetic.

Infectives Materies Generated in the Act of Inflammation.

Dr. Johnathan Hutchinson (Archives of Surgery, July, 1898). Whilst there can be little doubt that the introduction, at the time of the injury, of some living germ matter (bacillus) developed in connection with the process of inflammation in the contributor, very greatly adds to the risk, and gives character to the inflammation induced, there are good reasons for doubting whether any such material is essential. It is highly probable that is some instances a chemical product of decomposition may take its place,and further that in some cases no poison of any kind has been introduced. In the latter group,we have to suppose that the tissues of the person wounded are capable of generating, as the result of merely mechanical irritation, a poison which shall prove infective. We have to accept the proposition—in all probability a truth—that the inflammatory process, however initiated, is always attended by the production of a virus (living or chemical, or both). Inflammation in its early stages always leads to multiplication of modified cell organisms which may prove infective; in its later stages it leads to death of cells, and may favour the access to the blood of chemical elements, the result of decomposition, which may prove very injurious. All inflammations attended by conspicuous gangrene are productive of fever and accompanied by "poisoning of the blood."

Contraindications to Bicycling for Women.

Ballantyne (International Medical Journal, June, 1898) names the following contraindications to cycling: Pregnancy, menstruation, the three months following parturition, and before the age of seven years. Further, the morbid states of the heart, lungs, kidneys, and brain, which contraindicate other forms of muscular exercise, will also preclude cycling. Most writers are agreed that acute pelvic inflammation, recent displacements of the pelvic organs, fibromyomata,ovarian cysts and hematoceles form distinct contraindications to cycling; but it may be well here to give the list of gynecological troubles owing to which Fauquez has found that the exercise must be abandoned. It is as follows: Amenorrhea, in connection with phthisis, cancer, diabetes, and organic diseases of the heart or kidneys: metrorrhagia, or menorrhagia; inflammation of the uterus and its appendages;acute metritis,painful chronic metritis, hemorrhagic or purulent endometritis, salpingitis, ovaritis, salpingo-ovaritis, perimetritis, pelvic cellulitis, and pelvic abscess; pelvic hematocele, and uterine fibroids during the hemorrhagic period; and in vulvitis and vaginitis before complete cure has been effected. With minor degrees of prolapse, chronic pelvic inflammation, subinvolution, and uterine retroversions and anteversions, medical opinion is not yet fully formed. Here the gynecologist ought to make a complete survey of each individual case, and form his own opinion. Women wearing a well-fitted pessory are not debarred from cycling. Women of advancing years, especially if near the menopause, should be extremely careful with regard to exercise.

Alcohol and Infantile Convulsions.

Dr. Mennier reports a child five weeks old, whose parents were healthy, there being one child older. (Edinburgh Medical Journal). A wet nurse had been engaged, who was to all appearance quite healthy. The most careful examination failed to reveal any of the ordinary causes of infantile convulsions. There was no elevation of temperature nor abnormal disorder. The attack began with anuria, lasting for a whole day. It was only as the results of most careful examination, and after changing the nurse, that the discovery was made that the first nurse engaged was in the habit of consuming about two litres of wine daily. The writer lays down the following observation in connection with this case and and others, that alcoholism on the part of the nurse is a competent cause of convulsions in a breast-fed child; that such convulsions are preceded by nervous irritability, general hyperæsthesia, but without gastro-intestinal derangement, elevation of temperature, or pulmonary complication. They are apt to appear in extremely well-nourished children. As regards the fits, they show marked tendency to increase in number and severity. In some instances there may be anuria. Under such circumstances it is necessary to inquire carefully into the habits of the nurse, and to make a change as early as possible.

A Rectal Ulcer and Its Sequences.

T. A. Davis, M. D., Chicago, Ill., (Chicago Clinic) contributes an instructive article with this title. He says:

Syphilitic ulcer of the rectum; peri-rectal cellulitis; ischo-rectal abscess; extensive destruction of the paraproctium; the levator ani and transversus perinæi muscles, resulting in a complete dislodgment of the rectum from all but its peritoneal moorings, with its complete descent below the perineum for a distance of two and a half inches when the patient assumes a standing position.

Ten operations recorded on the case in Cook County Hospital. The patient maintains she has had fourteen.

Recovery. History of the case.

The patient is a French woman, thirty-eight years of age; married, and has had one child. At the birth of the child she sustained an incomplete laceration of the perineum. This was previous to the contraction of syphilis.

She was first admitted to the skin and venereal disease ward of Cook County Hospital in March, 1894, suffering from tertiary syphilis, which she said she contracted by mouth from her practice with men just before the World's Fair. The primary lesion occurred on the lower lip.

She remained in the skin and venereal department for but a few days, when she was transferred to the surgical department for the treatment of a rectal ulcer, rectal tenesmus and diarrhœa.

This patient has been the bete noire of members of the different staffs since her admission, because with every operation she grew worse, and her demand for operative relief, kill or cure, became more imperative. "French Mary" has been a well-known character to the dermatologists, gynæcologists and surgeons in the past four and one-third years' history of Cook County Hospital.

She came under my service February 27, 1897, at which time the rectum was completely dislodged from its moorings, excepting the peritoneum, and it hung two and one-half inches below the perineum when the patient stood erect. When she lay on her back the peritoneum retracted so as to draw the rectum with the large granulating sinus, when the index finger could be swept around the bowel in the sinus to the depth of two and one-half inches. The history of the patient has been taken away from the hospital, so that I could not get in detail the previous treatment, except such tradition as the "esoteric circle," the internes, could give me by word of mouth.

I learned that from the syphilitic ulcer of the rectum, pus infection spread to the ischio-rectal fossa. Multiple ischio-rectal abscesses followed, until the complete dislodgement, described above, occurred. Local treatment to the ulcer, sphincter stretching, cutting, curetting the sinus and internal treatment of mercury and iodides had been given.

Furthermore, the gynæcologists had operated upon the cervix and perineum; on the latter without success. The rectal ulcer was cured.

Plate I shows the condition at the time of my first operation. I did a subperiosteal resection of the last sacral body and the coccyx, and curetted the sinus wall, hoping thereby to change the perineal plane so as to drain the sinus well, and thus favor reunion of granulating surfaces of gut and sinus walls, which were sutured together. There was no benefit derived from this operation, very little union having taken place. The failure I attributed to the disturbance of the wound from the physiological functionating of the bowel, so I determined to establish an artificial anus.

My second operation was done eight weeks after my first, April 27, 1897. This consisted of left inguinal colostomy at one

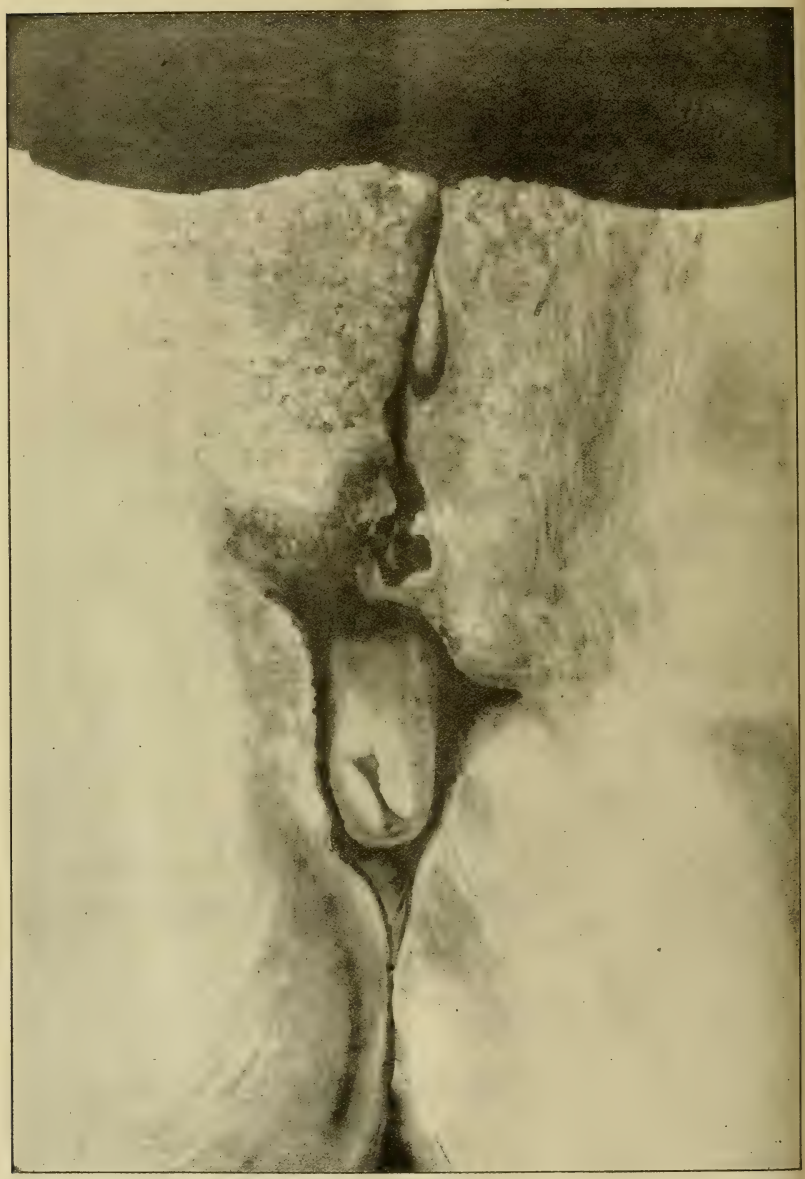

Fig. 1.

sitting, American method. After this operation the healing of sinus was rapid, and in ten weeks' time the whole perineum was cicatrized over, leaving no visible anal opening. The patient's general health improved. The "septic color" left her and she got quite well indeed. The patient was not satisfied with the artificial anus, although it was perfect of its kind, and demanded the restoration of the anus to its normal position. My third operation, October 11, 1897. On running water from the irrigator into the distal gut from colostomy opening, a very small spurt indicated the anal opening and served as a guide. The opening was slightly dilated, or torn, rather, and a knife was inserted, and four incisions, equal distant from each other, radiating from the center aud extending through the fibrous tissue to normal skin, were made. The skin and mucous membrane from the ends of these incisions were drawn together, as is commonly done for marginal anal strictures. This operation resulted in a large anus, but infection of the perineal fibrous tissue necessitated further procedure. Healing would not take place. On May 12, 1898, I dissected out all of the scar tissue from the perineum and sutured the bowel to the skin, using silkworm gut sutures with iodoform gauze buttons, alternating first one in bowel and then one in perineum. Six of these tension sutures and about a dozen coaptation sutures of silkworm gut were used. Patient made a good recovery and wound healed by primary intention.

Fig. 2.

Fig. 3.

My last operation was done May 26, 1898, a month ago. It was to close the artificial anus.

It consisted of the following steps:

1st. A circular incision through skin around the "rosette," with the excision of the skin.

2d. The introduction of a long rubber tube from distal into the proximal bowel, which I thought might be servicable in permitting gaseous or other matter to pass without contaminating the field of operation, and also by the elasticity of the tube it inverted the bowel wound and served well also as a frame on which the subsequent work of closing the bowel was done.

3d. Closing of opening in bowel with three rows of cat-gut sutures.

4th. Closing of external wound with silkworm gut sutures through fascia and skin. The peritoneum was opened in one point only.

It may be interesting to state the manner of introduction of the rubber tube. The long, curved forceps were first passed into the proximal bowel through artificial anus, but I was unable to get it through the sigmond curves. I then tried in the same

manner, and was successful, with a large rectal elastic bougie. I then tied heavy silk thread to the bougie and with it drew the rubber tube up through "rosette." I then pushed the tube through rosette into promimal bowel for the distance of about six inches. This tube was allowed to remain for forty-eight hours to conduct gaseous and other matter from the bowel, and thus prevent tension upon the wound. I had intended to pack iodoform gauze strips around tube, having the ends of the strips fastened to silk thread, by which they could be withdrawn through the anus after the operation, but the bowel was so well prepared that I did not need to use them.

Fig. 4.

There are two important things demonstrated in the case; one is the value of, and necessity for, physiological rest in promoting healing in the region. The second is the ability to get a patent anus by extensively dissecting away the fibrous tissue in such cases and sliding in and suturing the elastic tissue of the buttock.

The last cut shows the line of suture two weeks after last operation, healing taking place without suppuration.

The patient has control over the bowel, having an evacuation voluntary each day with little effort.

This rather surprised me, and I shall study with interest for the exact conditions of the rectal apparatus for a while. The external sphincter was cut off from its cerebro-spinal nerve supply, I supposed, by the suppuration process. It was separated from the levator ani muscles and skin. The lower end of the bowel, as it was extended,

Fig. 5.

presented a club-shaped form from the thickening due to inflammatory infiltration of the sphincter. The sphincters had some power, however, and now the rectal control can be accounted for only by reattachment to muscles and returned innervation.

The Heart in Normal Pregnancy.

Vaquez and Millet states, according to the University Medical Magazine, that cardiac hypertrophy does not result during pregnancy, notwithstanding the popular view to that effect. They examined thirty-one cases, and in seven only was there an increase in the area of cardiac dulness, this being due in each instance to a well-recognized cause. Temporary dilatation and arrhythmia may occur, however. In pre-existing cardiac disease normal pregnancy acts deleteriously, but the authors do not believe that the accidents occasionally noted during pregnancy are the result of myocarditis and fatty degeneration. The disturbance of the cardiac circulation is probably the cause of the exaggerated striation and nuclear swelling with atrophy and disintegration of the cells, and also of the capillary dilatation and apoplexy of the right-sided myocardium. These are probably produced by a disturbance of equilibrium between the intracardial and pulmonary circulations. In order to avoid cardiac

troubles during pregnancy it is recommended that the patients take rest in bed and a milk diet, with only moderate exercise. An absolute milk diet is necessary only in case of renal or hepatic congestion, as shown by the symptoms. Digitalis must be exhibited when general symptoms of cardiac insufficiency appear. In case of marked disturbance of the pulmonary circulation, as in mitral stenosis, the treatment consists in absolute rest in bed, milk diet, hot thoracic applications, and theobromin or Dover's powder internally. Premature labor must be induced if the symptons are severe after the sixth month and do not improve under four to six weeks' active treatment. In all patients suffering from cardiac lesions chloroform should be used during labor. Digitalis is not well borne in cases due to mitral stenosis. Should the pulmonary symptoms persist after labor hypodermic injections of morphine act beneficially. As to patients with cardiac lesions marrying, this may be permitted if the lesion is slight and does not produce symptoms. Cardiac insufficiency or the presence of marked mitral stenosis should contraindicate marriage.

Icecream Poisoning.

Edgar H. Nichols, M. D. (Pediatrics). Of late an alarming number of cases of icecream poisoning have occurred, and it is perhaps not amiss for us as physicians to instruct the patients as to the nature of the poison which so quickly affects the patient. It is caused by one of the newly isolated and deve oped crystalline poisons of the ptomaine class which has been named by its discoverer, Vaughn, tyro-toxican.

Vaughn isolated this substance from poisonous cheese, poisonous milk, poisonous icecream, etc.; chemically it is very unstable. It may disappear altogether in 24 hours from milk rich with the poison. It induces vertigo. nausea, vomiting, chills, rigors, severe pains in fhe abdomen, dilatation of the pupils of the eyes, griping and purging, a sensation of numbness or "needles and pins," especially in the limbs, and marked prostation, and even death. Symptoms differ in individuals. This poison is thought to be the cause of the summer diarrhea of infants.

Poisoning from milk is less common than from certain varieties of cheese and from cream. When icecream is made in large quantities the cream is allowed to accumulate, and if a portion of it becomes infected with the germ it will soon convert the whole mass into highly poisonous material. In Michigan, in 1883, Vaughn collected the details of 300 instances of this cream poisoning, at the same time he found in the intestines of infants suffering from milk infection similar poisons. Its effects occur almost immediately after ingestion of this poisoned cream in infants or children previously healthy, and the symptoms are like cholera morbus, only there is graver and more profound collapse. This collapse may prove fatal in a few hours if the poison be not eliminated.

This sudden effect has long been observed, but until recently has never been carefully studied; these sudden deaths by collapse required our closest attention to discover a poison which was so subtle as to leave no trace; so unstable as to disappear in 24 hours from a large mass of the vehicle; so singular as to effect one person taking but a trifle of the poisoned mass, while those partaking of many times the amount of the affected one may escape; so treacherous as to remain dormant in the human stomach 24 hours undiscovered and suddenly producing depressing effects in the nervous system like that of meat or pork poisoning.

Nature fortunately assists the patient before a physician can give his emetic, as vomiting and purging frequently precedes the intense pain in the abdomen, thus getting rid of most of the poison.

This season strawberry icecream has generally been blamed on account of a supposed chemical disturbance in the mass generating the irritant, but vanilla cream and plain cream have been equally suspected. The acid and tin are probably not factors in the distressing effects.

As icecream is undoubtedly the most refreshing accompaniment to our summer excursions, it certainly behooves us to look into the conditions under which the poisons develop. Tin churns which have become rusty or worn should be replaced by agate, or, better still, procelain churns. Boiling the milk before freezing, which, when ready for the cream, if sterilixed cream is used, would reduce the danger of infections. Throw doubtful strawberries away, or, better still, do not use strawberries at all. As vanilla is expensive, few use the genuine; it is the Tonka bean that the bulk of our vanilla is made from. Long continued success in business makes people careless, but now that cream poisoning is so frequent, the makers should look more carefully into the detail of their output, superintending the manufacture themselves instead of leaving the making of it to employes. Test the milk for its purity.

Always eat slowly and, if possible, do not eat on a full stomach, as 98½ deg. is the temperature which the humam stomach requires for its perfect digestion, and ice

cold cream so reduces its temperature as to stop digestion at once, and precipitates an acute attack of indigestion. The mixture of other foods, such as shell fish, crabs, schrimps, etc., endangers, by their mixture, digestive troubles.

It has been currently reported that ice-cream is sold from northern industries, being made, packed and transported by rail to us. This, to my mind, involves great responsibility upon the vender, as he should know of its purity and condition of freshness in ordet to portect his patrons. It would be difficult to guarantee against inferior milk under these circumstances, not to speak of the possible changes in transit.

We must obtain reliable cow's milk, and if, with the necessary ingredients added, the mass is sterilized and frozen, the danger of tyrotoxicon,or icecream poisoning,would be reduced to a minimum.

The Use and Abuse of Hypnotics in Insomnia.

The following article appeared in the May number of the Post Graduate, and contains a large amount of useful practical information on the above subject:

The use of hypnotics in the treatment of insomnia is simply the use of symptoms remedies; insomnia is a symptom, not a cause of disease nor a disease. Sleep is essential to the welfare of the organism in the same sense that food is. Deprivation of one or the other causes death in about the same period of time.

The use af hypnotics, therefore, should be temporary, while the underlying cause of the insomnia is being removing or palliated. Nor, indeed, is it well at the outset to employ hypnotics without trials of other measures. Aside from the removal of somatic causes for sleeplessness, various general methods may be employed. One of the best is a bath at 104 deg. Fah. for five minutes. The general cutaneous vascular dilatation, increased by rubbing with a coarse towel, is frequently followed by a good night's rest. Warm liquid food, as a glass of hot milk, a bowl of soup, will often give satisfactory results. In fact, some of the hypnotics which,on account of their insolubility, must be given in considerable quantities of hot liquids, owe not a little of their reputation to the vehicle in which they are administered. In debilitated individuals, a glass of stout or whisky in hot water (hot Scotch) may work wonders. In tired subjects, strychnine sulphate in moderate doses acts as a hypnotic, not because it makes a too tired individual just tired enough to sleep, as a distinguished professor of medicine would have it, but because strychnine dilates arterioles. Sometimes stimulation of the emunctories, as by sodium sulphate, again in hot water, taken at night, will be followed by sleep, parcticularly in gouty subjects, not because it is hypnotic, but on account of its action on liver, intestines, and kidneys. Methods which relieve pain —position, topical applications—are hypnotic.

Sleep is accompanied by cerebral anæmia and systemic cutaneous vascular dilatation. Any method whieh produces these effects will tend to the production of sleep. When these all fail, and often they do, hypnotics must be resorted to. The safest only should be chosen; they are choralamide, pollotine, paraldehyde and trional.

The abuse of hypnotics comes from two sources: (1)careless and ignorant physicians, and(2) conscienceless prescribing druggists. The careless physician prescribes for the symptom insomnia, little caring whether it be due to cerebral degeneration, organic cardic disease, obstructive pulmonary disease, latent gout, functional intestinal derangements or hysteria. The ignorant physician uses opium or its alkaloids, not knowing that these are narcotics, clubs a patient into insensibility, and calls it sleep. Here commences the opium habit, or, not believing in "new-fangled" remedies, he keeps closely to choral, and either adds to the list of chloral fiends or terminates the life of one who is suffering from an unrecognised heart lesion, the cause of the insomnia. Or, again, he may be a therapeutic nihilist—a polite name for the therapeutic ignoramus—and finding that drugs when administered by him have but slight beneficial effect, concludes that they have none at all, launches out with a combination of drugs, and succeeds in making his patient sleep because, with all functions overwhelmed, he can do nothing else. The danger of hypnotics are immediate (death) or remote (interference with nutrition.) The possibility of habit is always to be borne in mind. Druggists are responsible for a large share of the abuse of hypnotics. They openly prescribo hypnotics in doses far exceeding those considered safe, and further repeat prescriptions containing hypnotic drugs, even when the prescription distinctly forbids this. In England, sulphonal is sold as openly and carelessly as are the ordinary necessities of life. With equal ease coffee can be purchased for breakfast and sulphonal for bed-time. The same is true in this country. So long as druggists prescribe and sell without authority, so long will hypnotics be abused. All druggists are beyond control.

The only remedy lies with the physician. Let him study his *materia medica*, learn his therapeutics, and apply intelligently what he has learned. Then, and only then, may we get the best results with the fewest disadvantageous symptoms, do the most for our patients, and, after all, rest with a consciousness of duty well performed.

The Value of Rectal Lavage and Irrigation.

Guiteras discusses this subject as follows (The Post Graduate):

In cases of pelvic inflammation as endometritis, metritis, salpingitis, oophoritis, peritonitis and cellulitis, the same hot irrigations of bland fluids are of very great benefit. Here it is necessary to take the irrigations twice or three times a day, often for an hour each time, taking care to compress the tube so that as much of the fluid as possible will be continually in the intestine. In this way, from 16 to 24 ounces may be continually kept in contact with the tissues.

Care must be taken not to use such douches in cases of pregnancy, as abortions may in this way be produced.

It is easy to understand how a rectal irrigation may be efficacious in cases of disease of the inner wall of this passage as the fluid comes in contact with the lesion; but it is more difficult to comprehend how it can be of value in diseases of the neighboring organs such as those of the genito-urinary tract of the male and female.

In order to show more clearly how this is accomplished, I have made certain drawings from frozen sections which show how closely the genital apparatus is associated with the anterior wall of the rectum and how the treatment by irrigation can be of benefit through this indirect route. The reason why more investigations of this kind have not been carried out in the male is on account of the separate functions of the lower gut and the urinary tract.

They are both excretory; the former appears to be simply the sewer that carries off the refuse from the ingesta after the process of digestion has taken place; while the latter represents the refuse in solution that has resulted from tissue metamorphosis waste.

The condition of the genital tract, the centers of which are closely packed in between the two, and are in almost as close relation to the former—the rectum as to the latter—the urinary apparatus, is generally not sufficiently considered.

The reason for this is that the general practitioner is not familiar with a digital examination of the rectum, the only method by which a clear idea of the conditions of this tract can be obtained.

It is indeed difficult for many medical men to outline the prostate, and I have known it to take weeks for them to even distinguish the seminal vesicles.

It is, therefore, only after one is familiar with the relations of these organs that he begins to observe how frequently conditions in one part have been ascribed to those of another.

For instance, a man with a prolapse of the rectum who applies for treatment for its relief may be found to have an enlarged prostate which almost wholly blocks the outlet of the rectum, or he may have a stricture of the deep urethra. On the other hand a man may have frequency of urination and pain in the perineum or about the neck of the bladder when his deep genital and his urinary apparatus are in order, but in whom a rectal fissure, hemorrhoids or an ulcer may be found on local examination.

In women, on account of the ease with which a vaginal examination can be made and the direct route that it affords to their genital tract, a rectal examination is rarely made unless they complain of some trouble in this part of the lower bowel, and here the examiner is frequently amazed to run into a displaced uterus which presses into the anterior wall of the rectum, pushing it back, which is as much of a barrier as the enlarged prostate already spoken of in the male. He may also be surprised to find out how much of an aid to a diagnosis this rectal examination may be, as by this means he is enabled to "enter behind the scenes," and to obtain frequently a clearer idea than he could by the usual bimanual method. This will also show him another important point at times—namely, that the tubes and ovaries appear to be closer to the finger when in the rectum, than when in the vault of the vagina, in which case a rectal irrigation would be of more value as a direct method of treating these organs than a vaginal one.

He sums up its utility in various conditions thus:

1. In rectal hydrotherapy by means of irrigations we have an extensive field for work and observation. 2. That the best results are obtained in cases where there are distinct pathological lesions in the rectum or lower bowel. 3. That the diseases of the genital tract, both in the male and female, are far more benefited by this treatment than is generally supposed. 4. That the influence of these irrigations on the secretion of the kidney as shown in this article is of the greatest importance, and should

be tried in all cases where other means now in vogue have proved unsuccessful. 5. That the effects of this procedure on the circulation seems to be so stimulating and so opposed to the conditions of shock, that it would be advisable to employ it in cases of severe operation where there have been or there is expected to be a considerable loss of blood, as a preventive measure.

The Attitude of the Profession to Cycling.

It is probably a fact that previous to the advent of the bicycle there had never been a form of outdoor exercise so permanently popular, and withal so beneficial to urban and suburban dwellers, as cycling. It is true that it would be possible for the anatomist and physiologist to devise a system which might distribute muscular activity more evenly throughout the body than is done in riding the wheel; but, hygienically considered, the advantages of the former over the latter form of exercise are vastly outweighed by other considerations.

It is difficult to over-estimate the influence of the mental state in its relation to the performance of the several bodily functions. For instance, substances very indigestible artificially may be eaten with impunity if relished, while foods most easily digested in the laboratory may be promptly rejected when taken into the stomach if they are in any way distasteful. A similar analogy holds in regard to bodily exercise.

Congenial companionship, an ever-changing scene, a delightful sense of auto-propulsion are some of the common mental accompaniments of cycling which have to be taken into account when an attempt is made to estimate the value of this form of exercise. In fact, in cycling the actual use of the muscles may almost be regarded as an incident subordinate to the many agreeable mental impressions. Aside from the criticism that it may be indulged in to excess—and this may be said of all good things—about the only serious objection that can be made to wheeling has reference to the kind of saddle used. While it is true that many young people can ride almost any form of saddle without experiencing any very immediately alarming symptoms, they may at the same time be doing themselves an irreparable injury. With some young, and nearly all older people, however, the case is different, because they not only rest a greater proportion of their weight upon the saddle, but the parts exposed to pressure by a faulty saddle—the prostate gland and prostatic urethra—are so sensitive that pain and serious injury may occur only too promptly. In growing boys it is, of course, obvious that the parts should not be exposed to pressvre or irritation.

The foregoing considerations constitute by no means all the reasons, but reasons enough, why physicians should carefully investigate the saddle question to the end that their patrons may avoid possible grievous injury.

Apples as Medicine.

Chemically the apple is composed of vegetable fibre, albumen, sugar, gum, chloraphyll, malic acid, gallic acid, lime, and much water. Furthermore, the apple contains a larger percentage of phosphorus than any other fruit or vegetable. This phosphorus is admirably adapted for renewing the essential nervous matter, lethicin, of the brain and spinal cord. It is, perhaps, for the same reason, rudely understood, that old Scandinavian traditions represent the apple as the food of the gods, who, when they felt themselves to be growing feeble and infirm, resorted to this fruit for renewing their powers of mind and body. Also, the acids of the apple are of great use for men of sedentary habits, whose livers are sluggish in action, these acids serving to eliminate from the body noxious matters which, if retained, would make the brain heavy and dull, or bring about jaundice or skin eruptions and other allied troubles. Some such experience must have led to our custom of taking apple sauce with roast pork, rich goose, and like dishes. The malic acid of ripe apples, either raw or cooked, will neutralise any excess of chalky matter engendered by eating too much meat. It is also the fact that such fresh fruit as the apple, the pear, and the plum, when taken ripe and without sugar, diminish acidity in the stomach rather than provoke it.

Their vegetable salts and juices are converted into alkaline carbonates, which tend to counteract acidity. A good, ripe raw apple is one of the easiest vegetable substances for the stomach to deal with, the whole process of its digestion being completed in eighty-five minutes. Gerard found that the "pulpe of roasted apples mixed in a wine-quart of faire water, and labored together until it comes to be as apples and ale—which we call lambeswool—never faileth in certain diseases of the raines, which myself hath often proved, and gained thereby both crownes and credit." "The paring of an apple, cut somewhat thick, and the inside whereof is laid to hot, burning, or running eyes at night, when the party goes to bed, and is tied or bound to the same, doth help the trouble very speedily; and contrary to expectation—an excellent secret."

A poultice made of rotten apples is of very common use for the cure of weak or rheumatic eyes. Long ago it was said, "Apples do easily and speedily pass through the belly; therefore they do modify the belly," and for the same reason a modern maxim teaches that—

"To eat an apple going to bed,
The doctor then will beg his bread."

The Differential Diagnosis Between Dengue and Typhoid Fever, with Some Account of the Epidemic of 1897 in Texas.

Dr. H. A. West, of Galveston, read a paper with this title at the Denver meeting of the American Medical Association.

The following hypotheses have been assumed in relation to the recent epidemic:

1. The disease was dengue only. There was no yellow fever in Galveston or Houston, Texas, in the year 1897. 2. There were anomalous cases of dengue, presenting the symptoms of yellow fever, but not proven to be that disease by its indisposition to spread from numerous foci and the low mortality-rate. During the progress of an intense epidemic of dengue throughout the State, yellow fever made its appearance at Galveston, Huston, and possibly at other places; but on account of its mild form and resemblance to the prevalent disease, it was quite generally unrecognized. 3. An imputed hypothesis that the epidemic of 1897 in Texas was yellow fever only. 4. A few cases terminated fatally, and others attended by marked jaundice and albuminuria were denominated acute infectious jaundice (Weil's disease).

It appears that the symptoms that have hitherto been relied upon to differentiate between yellow fever and dengue are the occurrence in the former of albuminuria, the characteristic facies (inclusive of jaundice), the divergent pulse and temperature, excessive irritability of the stomach, and increased disposition to hemorrhages. The absence of such symptoms in the main, the presence of an eruption in the large proportion of cases, and a want of mortality are characteristic of dengue. Admitting that there is a greater similarity in the symptomatology of the two diseases than has hitherto been acknowledged, the question arises how they can be differentiated. In my opinion simply by the symptom complex of an acute nephritis in yellow fever and its absence in dengue. In the latter simply parenchymatous changes may occur in the kidney and be manifested by an evanescent and mild albuminuria; while in the former a series of many cases will afford incontestable evidence of the occurrence of severe nephritis, namely, scanty urine of high color and specific gravity, intense and persistant albuminuria, hematuria casts, decided tendency to suppression and the accompanying uremia.

Cystitis and Urine Infection.

Dr. Max Melchior, in his recent writings on this subject, arrives at the following conclusions:

1. Every cystitis is due to microbes, with the exception of rare poisoning with chemical substances. 2. In general, we find in the urine of cystitis a pure culture of a single species, generally in very large amounts. 3. The bacillus which is found most frequently in cystitis is identical with a very common intestinal parasite, the bacterium celi commune; it is pyogenic and infectious, and of varying virulence. 4. In the urethra, the male prepuce, and the vagina, pathogenic bacteria are frequently found—bacteria which when conveyed into the urinary bladder can give rise to a cystitis. 5. The microbe itself does not give rise to cystitis; still there is a bacterium—proteus of Hauser—which by simply entering the urinary bladder may give rise to a cystitis. 6. The microbes can produce a cystitis only when the urinary bladder, on account of the influence of various predisposing circumstances, especially retention or trauma, is made susceptible to the infection. 7. Retention of urine, as well as trauma pure and simple, is incapable of producing a cystitis. The microbe is always the deciding cause. 8. The varying nature of the cystitis depends upon pre-existing lesions and upon the character of the substrata in connection with the various peculiarities of the bacterium, among which the virulence must be rendered prominent. 9. In every cystitis the urine contains pus cells, but in very varying amount; the existence of a catarrhal cystitis is to be looked upon as doubtful. Even non-pyogenic microbes may cause a suppuration of the urinary bladder. 10. The ammonuria may be a necessary condition for the occurrence of a cystitis; most frequently, however, it is but a subordinate phenomenon which appears in the course of cystitis or remains away altogether. The majority of cystitis cases are acid. 11. Besides tubercle bacilli, an acid cystitis may depend upon the bacterium coli commune, the streptococcus pyogenes, and on rare micro-organisms (gonococcus of Neisser, bacillus typhi abdominalis). If the sterile urine does not produce any culture upon the ordinary

media, the great probability is that a tuberculous cystitis exists. 12. There exists a real gonorrhœal cystitis, caused by the gonococcus of Neisser. 13. The urinary fever is partly due to transmission of the urinary microbes into the blood, partly—and certainly more frequently—to an absorption of the soluble toxins which occur in the urine. 14. To prevent a cystitis, we must not only be certain of a thorough asepsis of the ureorifice, but we must also irrigate the uretha with boric-acid solution. 15. In the local treatment of cystitis nitrate of silver is the sovereign remedy.

Treatment of Bronchitis by Drugs.

Prof. Leech in a recent issue of The Practitioner calls attention to errors in the administration of the drugs commonly employed in bronchitis. In the treatment of acute bornchitis of adults there is no better combination of drugs than that of acetate of ammonia, spiritus ætheris nitrosi, and ipecacuanha or antimony, but in the case of the first-mentioned remedies the dose employed is generally too small. Liq. ammon. acetatis is ofter prescribed in drachm doses to be given every four hours; the author finds that not less than 2 drachms has any effect on the skin, and believes that it is better to begin with doses of 3 drachms, and to increase the amount to 6 drachms if the skin does not act freely; marked relief to the breathing often accompanies the diaphoresis. With regard to sweet spirit of nitre, it is improbable that doses of 15 or 20 ♏. in which this drug is often ordered, has any effect on the course of the disease; it may act in ½-drachm doses, but in doses of 1 or 2 drachms, especially when repeated at short intervals, it has commonly a very distinct effect as a diaphoretic. Owing to the ethyl nitrite which it contains (but in very variable quantity) sp. æth. nitrosi probably gives relief also by relaxing spasm of bronchial muscles and dilating the vessels. With reference to ipecacuanha and antimony, the author considers that antimony (1-20 grain) is of most service where there are small basic moist sounds and the breathing is oppressed, whilst where there are dry rhonchi all over the chest, with irritable cough, ipecacuanha is more useful than antimony. In chornic bronchitis ammonia, senega, squill and ipecacuanha are the drugs most commonly employed, with digitails and strychnine to counteract cardiac or respiratory failure. The dose in which carbonate of ammonia is frequently given is too small. Five grains every four hours may have a beneficial action on the stomach as a carminative and antacid, but probably exert no influence on the circulatory or respiratory organs, whilst a dose of 10 grains every hour or two causes distinct quickening and increased strength of the pulse, with deeper respiration and greater facility of expectoration. To produce the desired effect it should be given at short intervals. The usual combination of the drug with senega and squill makes an unpleasant mixture, and as the latter remedies cannot be administered at frequent intervals, the author recommends that the carbonate should be disolved in water and given in milk. Five grains may be thus given without imparting to the milk a taste to which the patient will object. Both senega and squill are gastric irritants and should not be given at intervals of less than four hours. Clinical experience shows them to be of use as expectorants, but when there is much dyspnœa and accumulation in the bronchial tubes ipecacuanha in large doses is of more service. Oxygen in inhalation, though not really a curative agent, often removes cyanosis and gives marked relief. Its use should be commenced early to prevent the onset of pronounced cyanosis, which, when once established, may be only slightly benefited by oxygen.

A Plea for Early Operation for Lacerations of the Cervix Uteri.

Dr. Joseph B. Bacon (Illinois State Medical Society, May 18th, 1898) described a new adaptation of pathologic facts, as recognized in the disease affecting non-striped muscles and fibrous tissues in other organs, and showed how like conditions may help to cause some of the serious results found in neglected cases of severe lacerations of the cervix. He claimed that the destructive changes found in both the fibrous and muscular tissue of the cervix, and later in the body of the uterus, are due to the presistent chronic inflammation, and that these changes can be avoided by an early operation, but if neglected, there is no limit to the destruction, and in time no operative procedure will more than relieve a part of the symptoms, and cannot remove the diseased tissue and cure the woman. He claimed that the same pathologic laws that explain cicatricial strictures of the rectum, as advocated by Harrison Cripps, apply equally well to the cicatricial changes that are found in the cervix uteri, because there is a like anatomic make-up of the muscles, glands, and excessive fibrous tissue, normally present in both. First, the tendency of fibrous tissue, subjected to chronic inflammation, to become both hypertrophied and contracted, and second, the tendency of muscular fibers, when sub-

jected to undue and persistent nerve irritation, to undergo fibroid degeneration with permanent atrophic contraction of its fibrous elements.

Auto-Intoxication.

The British Medical Journal, in one of its recent issues, discusses Auto-Intoxication. This is an interesting subject.

The difficulty and uncertainty of medicine lead to the adoption of many a theory as a makeshift or as a hope. To look upon many diseases as caused by poisons produced by the body itself is the latest refuge of pathology. The recent growth of the belief is to be traced, perhaps, to the pathology of the thyroid gland. Pathologists appear disposed to regard this as a body whose function prevents a certain form of degeneration, which in its absence the body tends to take on. Certain experiments upon the pancreas followed, which elevated this gland also to a similar position. The testes were believed by Brown-Sequard to perform a like office, and a similar work has been suggested for the kidneys.

From this it was not a far step, and it was a step suggested by many clinical facts, to say that health depends upon the due performance of assimilation and excretion, and that not only a failure to cast off waste products, but also errors in the processes by which the various molecules are taken to pieces and the atoms joined into fresh combinations, will lead to disease.

Gout has long been thus explained; the nervous symptoms of constipation, and of that unknown state which laymen call "liver," point in the same direction; and of late years the theory has met with an unexpected support from bacteriology. The brilliant work of Sidney Martin leads us to believe that the poison of diphtheria is a product of our own body under the stimulus of a peculiar bacillus; and, if so, we should see in this an example of auto-intoxication produced by the action of a living organism, but otherwise analogous to that form which follows ingestion of dead matter.

Meanwhile the chemists have discovered the poisonous character of the albumoses and peptones formed during normal digestion, and the coagulating effect upon the blood of certain extracts from animal tissues, and have verified the presence in living tissues and in dead of alkaloidal bodies of a toxic nature.

Many reasons, therefore, seem to show that auto-intoxication may have a very widespread effect on disease, and entice us to offer it as an explanation of a great many states whose pathology is unknown.

But to form a hypothesis is one thing, to vertify is another; and it is not too much to say that hardly a single step has been taken in this direction. For the last fifty years we have known the immediate cause of the local manifestations of gout; but if we do not accept defective excretion as the whole explanation, no one has yet by trustworthy chemical methods shown how the urates accumulate in the blood.

None of the poisons formed in the digestive tracts have been traced in the blood, and in urine the amount of such bodies is so minute as to cause some doubt whether they exist at all, and it is quite as doubtful whether animal extracts such as Wooldrige's tissue fibrinogen play any part in morbid processes.

To turn to the other side of the case, that of defective excretion of waste products: although death by uræmia has been ascribed for many decades to this cause, no one has been able to show what is the waste product which causes the symptoms or whether there be more than one. Of late years Bouchard seemed to advance some reasonable evidence by his experiments upon the toxicity of urine. But the superstructure was too elaborate for the foundations, and his experiments, repeated by Beck, have led to quite different results.

At present therefore auto-intoxication is an almost unknown subject. It is supported by analogy, it is supported by evidence drawn from clinical pathology and from clinical therapeutics, and it is within limits a useful working hypothesis. But all this is nothing more than "predisposing" testimony; of direct evidence there is next to none.

A Method of Resuscitation in Apparent Death from Anæsthetics.

Herzog has published the results of some experiments he has undertaken on animals with a view of testing the efficiency of Laborde's method of "rythmical traction of the tongue" in cases of apparent death from drowning and anæsthetics. (British Medical Journal.) Laborde describes his method at the Medical Academy in Paris in 1892. His attention was first directed to the question by observing the good results which he obtained in the laboratory on narcotized animals, by rythmical traction of the tongue. In 8 cases of drowning, where the animal was kept under water for three and a-half minutes, resuscitation took place in 5 cases. In Sylvester's method animals cannot be revived after one and a-half minute's submersion. The directions for the use of Laborde's method are as follows: Place a piece of linen round the tip of the

tongue, and grasp it with the thumb and middle finger; now pull the tongue forward with a jerk, and then relax it again; repeat this manœuvre twenty times a minute. A sense of resistance is felt in the tongue before there is any attempt at respiration. Traction should be continued for thirty or sixty minutes. Herzog experimented on dogs; he administered chloroform till the respiration had ceased for one and a-half minutes. He found that Laborde's method was useless in cases of asphyxia in a late stage of narcosis; however, Laborde's method is distinctly useful when associated with other forms of resuscitation. Traction on the tongue is said to stimulate the centres in the medulla; this necessitates an increased blood supply to the part. The respiratory centre is in close proximity to the centres concerned in the movements of the tongue, the beneficial effect would therefore act on both.

Enteritis with Perforation Due to the Bacillus Coli Communis.

Snell (Lancet, July 30, 1898,) records a rather interesting case that was a diagnostic puzzle during life.

The patient was a man of good habits, aged forty-five years, who was taken sick April 20, 1898, with a sharp attack of diarrhea. He had not been feeling well for some days previously. There was malaise and slight headache, and the skin had a yellow tinge, though there was no jaundice and no fever. The tongue had a white coat. The urine was normal. May 4th there was a little fever, and this increased during the next three days until it reached 103.6 deg. F., the highest point touched during the whole illness. It fell twice to normal, but usually ranged irregularly from 99 deg. to 101 deg. F. The pulse varied from 65, the normal rate for this patient in health, to 80, changing suddenly from time to time from no apparent cause. The stools were at first slate-colored and partly formed, but later in the illness they become soft and chocolate colored.

The best physicians who saw the patient gave it as their opinion that the disease was not typhoid fever, and the absolutely negative results of the serum test supported their statement. The prognosis was considered good, as the patient was almost without symptoms, the rapid pulse alone indicating danger. This increased in the fifth week of the illness to 100, and in the sixth week to 120, and in the seventh week, that in which he died, to 140. It was at all times subject to sudden variations in its rate without apparent reason. Towards the end of the illness there was occasionally a little pain and stiffness in the muscles of the neck and limbs, and pressure in the right iliac region was slightly painful. Three days before his death the patient's mind began to wander, and he rapidly passed into a typhoid condition.

Upon opening the abdomen, twenty hours after death, there was found to be present a purulent peritonitis, starting from three small perforations in the small intestine, twelve to sixteen inches above the ileocecal valve. The floor of other ulcers in the same region was so thin that two more perforations occurred while the intestine was being removed. The whole small intestine, with the exception of the last three feet, appeared normal. In this lower part the whole thickness of the gut was swollen, soft, and pliable, being in places almost necrotic. The lymphoid tissue was especially swollen, and the ulcers, ten of which were present, seem to start therein, but to involve, in most instances, the muscular tissue as well, and to spread laterally rather than longitudinally. The mucous membrane of the large intestine was swollen along its entire length, and was more friable than usual, but there were no ulcerations present. The mesenteric glands of the affected ileum were greatly swollen, but the other mesenteric glands were normal. The spleen was little if any larger than normal. It was rather soft. Cultures and inoculation tests made from the pulp of the spleen all developed colonies of the bacillus coli communis, and of no other bacteria, showing that this germ was present in the spleen in a pure state.

Modern Treatment of Gunshot Wounds in Military Practice.

Dr. N. Senn, chief operating surgeon U. S. army, concludes a valuable paper in the Journal of the American Medical Association as follows:

1. In theory and practice military surgery is equivalent in every respect to emergency practice in civil life. 2. The wounded soldier is entitled to the same degree of immunity against infection as persons in civil life suffering from similar injuries. 3. The fate of the wounded rests in the hands of the one who applies the first dressing. 4. The first dressing should be as simple as possible, including an antiseptic powder composed of boracic acid, four parts, salicylic acid, one part, a small compress of cotton, safety pins, and a piece of gauze forty inches square. 5. Any attempt to disinfect a wound on the battlefield is impracticable. 6. The first dressing stations and the field hospitals are the legitimate places where

the work of the hospital corps and company bearers is to be revised and supplemented. All formal operations must be performed in the field hospitals, where the wounded can receive the full benefits of aseptic and antiseptic precautions. 7. Probing for bullets on the battlefield must be absolutely prohibited. 8. Elastic constriction for the arrest of hemorrhage must not be continued for more than four to six hours for fear of causing gangrene. 9. The X ray will prove a more valuable diagnostic resource than the probe in locating bullets lodged in the body. 10. Gunshot wounds of the extremities must be treated upon the most conservative plan, the indications for primary amputation being limited to cases in which injury of the soft parts, vessels and nerves suspend or seriously threaten the nutrition of the limb below the seat of injury. 11. Operative interference is indicated in all penetrating gunshot wounds of the skull. 12. Gunshot wounds of the chest should be treated by hermetically sealing the wounds under the strictest aseptic precautions. 13. Laparotomy in penetrating gunshot wounds of the abdomen is indicated in all cases where life is threatened by hemorrhage of visceral wounds and the general condition of the patient is such as to sustain the expectation that he will survive the immediate effects of the operation.

Epilepsy in Secondary Syphilis.

Rubino (British Medical Journal, July 16th, '98) contributes some observations on the occurrence of epileptic seizures in the course of secondary syphilis. He points out how epilepsy may occur as markedly in the secondary as in the tertiary period of this disease, being due to grave lesions of the superficial structures, or else to direct action of the virus on the epileptogenic centres, and manifesting itself apparently in those patients who are also prone to neuropathic symptoms. The author thinks that it is justifiable to look upon secondary syphilis as the cause of epilepsy when this condition occurs in adult age without other known cause in individuals who were not disposed to this nervous disorder, and in whom the specific affection has either remained latent or has only revealed itself by very slight signs. The clinical picture of secondary syphilitic epilepsy does not seem to differ in its essential characters from the ordinary form, and in referring to it therefore by its name, it is not intended to specify a special disease, but rather a variety, differing alike in its treatment and prognosis in view of its causation. The treatment must therefore be directed to the underlying condition. To this as a rule the seizures rapidly respond, but Rubino points out the importance of continuing antisyphilitic treatment for a considerable time; for if one rests content with the early and apparent immediate success, there is likely to be return of the seizures in a very chronic form.

The Course and Management of Complicating Myocarditis.

Dr. Louis Faugeres Bishop, of New York, read a paper with this title at the American Medical Association, June 8th, 1898. He said:

As diseases and conditions are unconsciously classified in the course of the practice of medicine, ideas develop which are not always easy to formulate into exact scientific observations. One of these impressions is that debility following severe disease is due to some more definite underlying condition than is generally formulated; an exhausted and deteriorated nervous system being insufficient to account for the condition. Attention is called to the heart muscle; and clinical observation, confirmed by pathological observation, has led to the belief that complicating myocarditis is an important factor in many conditions. In acute and wasting diseases of every nature there comes a time when it seems evident that the heart has participated in the debility and degeneration visible in the other tissues of the body. In milder cases there may be simply a weakness of contraction, while in the more severe the signs are indicative of myocarditis, namely, irregularity in force and rhythm.

We may conceive that the condition is an inflammatory state of the myocardium following acute disease, occurring in the course of chronic wasting disease, or beginning as an extension of inflammation from an endocarditis, or a pericarditis. Conditions secondary to diseases of the coronary arteries or excessive hypertrophy will not be considered. Our object does not demand an extended reference to pathology. A form may sometimes originate in an acute interstitial myocarditis, but more frequently it is a parenchymatous degeneration. Dr. Osler remarks that it is probably due to toxic agents and is not in direct relation to high temperature.

All are familiar with the fact that the heart of a patient who has died from acute prolonged disease is of a pale, grayish color, while that of a person killed suddenly is firm and has a healthy red color. In many diseases there is probably a low grade of inflammation, which is nothing more than a slight degeneration.

Cases are often diagnosed as general debility or disturbed cardiac enervation. It is important to recognize the real condition or else treatment may be harmful. Stimulants directed to the heart are certainly contraindicated. Stimulants should be avoided in cases of myocarditis following severe illness.

The proper care of the heart is especially important in those cases of acute infectious disease in which valve lesion has been developed by complicating endocarditis. In severe endocarditis myocarditis also probably exist, and the heart must not only gain its normal power but must do greater work to make up for the lesion in the valve. These patients should follow a long and strict regimen, avoiding indiscretions in diet, sudden exertion and dissipation of all kinds.

The treatment of degeneration of the heart fibre is a difficult matter, for often by the time we can say definitely that such a process is going on it is too late to accomplish much. The hopeful cases are those of complicating myocarditis accomanying acute disease.

One of the chief dangers of this condition is over-exertion, causing acute dilatation, from which it is not easy to recover. Exercise taken to improve the general bodily condition and that of the heart in particular should be light, slow and systematic. Food should be concentrated so that it is administered in small volume, leading to an easy performance of the functions of the stomach without tendency to distention, which would embarrass the function of the heart and lung. Much latitude as to the variety of food may be permitted so long as the principle of small volume is adhered to. The use of alcohol in cardiac affections without its abuse is very difficult. Probably the use of a small quantity with meals is not harmful. The use of tea and coffee must be a matter of individual experience, but the extreme frequency of cardiac symptoms produced in persons with normal hearts by tea, and the fact that both tea and coffee are cardiac stimulants should influence us to take the stand that all cardiac drugs should be under the control of the physician. The use of tobacco should be discontinued.

The patient who convalesces from an acute disease without suffering from degeneration of the heart muscle regains health and strength rapidly; the pulse becomes strong; the color returns and the patient is soon in good health. If there is a complicating myocarditis, the patient lingers along in a state of semi-invalidism. The disease from which he originally suffered had disappeared, and there is apparently no reason why he should not recover health and strength, but the heart remains weak until special measures have been employed to restore its integrity. This chronic complicating myocarditis explains symptoms so often observed after diphtheria, grippe, scarlet fever, and other diseases characterized by a violent infection.

The Different Forms of Colitis in Children.

Dr. L. Guinon, of Paris, in a very interesting paper describes the different forms of colitis in children in the following manner (Abstract, Treatment, July 14, 1898):

In the acute form of colitis the most prevalent symptoms are repeated vomiting, meteorismus, and tenderness of the abdomen, which might almost lead one to suspect the onset of peritonitis or typhoid fever; but frequency of motions and flatus and tormenting tenesmus soon lead one to make the correct diagnosis.

In the localized form of acute colitis, the ascending colon and the cæcum are mostly affected; the right iliac fossa and epigastrium are distended and the seat of violent colic pains. This affection differs from appendicitis by the less severe character of the pain, the diarrhœic motions, and the fact that the application of the ice-bag makes the pain worse. The diagnosis is very difficult if both affections are present at the same time. In most cases the symptoms subside rapidly; in others the inflammation creeps along the colon.

When the descending colon, the sigmoid flexure, and the upper part of the rectum are affected, then the pain is localized in the iliac fossa, and there is much tenesmus at defæcation.

In the dysenteric form of colitis the symptoms are more or less those of sporadic dysentery.

Chronic colitis is much more frequent than is commonly believed, especially in children over two years old when they had been suffering from chronic constipation. The onset may be sudden and slow. The children look pale and anæmic, the skin of the face and the neck is pigmented, dark rings encircle their eyes; their lips have a peculiar red colour; they are very thin, very susceptible to cold weather; their feet are cold, but their hands are burning hot. The base of the tongue is covered by a thick white fur; their breath smells bad. The abdomen is in most cases distended and tender; in others flat and painless. The pain is mostly localized in the iliac fossa. The children are excitable and quarrelsome, or depressed and languid. The attacks of griping pains come on suddenly, often when

the child is at play, or when his abdomen is slightly touched with the finger. Constipation is prevalent: hard, black, globular fæcal masses are expressed with difficulty; there may also be prolapsus recti. The motions are covered with streaks of slime and blood; their smell is foul. In other cases diarrhœa and constipation alternate with one another; the motions are fœtid, and mixed with brownish green frothy mucus. This kind of motion is especially frequent in children who have been put on exclusive milk diet. Fæcal concretions are sometimes to be found in the motions during these attacks of diarrhœa. The appetite is bad or varies; digestion is painful, slow, and often accompanied by rise of temperature (digestion fever); the urine has a strong, repulsive smell, and contains much indican. Such children grow very slowly, their bones and muscles remain very slender, their thorax narrow; signs of rickets are always absent. The affection is very troublesome to treat; neurasthenia is one of its commonest sequelæ; appendicitis is a rare complication, but cystitis is pretty frequent.

Papillar and pustular rashes on the extremities and abdomen are common; the face is seldom the seat of eruptions of that kind; purpura, diffuse mobilliform erythema, convulsions, and symptoms of meningeal irritation may sometimes be found to accompany acute or chronic colitis.

The Smegma Bacillus.

Dr. J. L. Miller, of Chicago, in a paper presented at the forty-eighth annual meeting of the Illinois State Medical Society, drew the following deductions:

First, over the entire surface of the body and exposed mucous membrane, and especially on the genitals, bacilli are found which resemble morphologically and in tinctorial qualities the bacillus of tuberculosis. Second, from the external genitalia they frequently gain access to the urine, especially in women, and may be a source of error in the examination of urine for tubercle bacilli. Third, the smegma bacillus presents wide variations in size and form, thus rendering morphologic differentiation frequently impossible. Fourth, while most smegma bacilli are more readily decolorized by any of the solutions commonly employed, occasionally they possess equal or even greater resistance than the bacillus of tuberculosis. Fifth, methods of decolorization, where acids alone are employed, are fallacious; acid-alcohol or dilute alcohols, unless long continued, are equally unreliable. Better, but not free from error, is the use of absolute alcohol for at least five minutes. In ammoniacal urine, however, such prolonged use of alcohol may also remove the stain from the tubercle bacillus. Sixth, attempts to remove the fat or fatty acids from the bacilli by ether, chloroform, or other solvents, fail to furnish us with a means of differentiation. Seventh, we must rely on means of excluding the smegma bacillus from the urine. It has never been demonstrated in the bladder, and apparently seldom involves the deep urethra; therefore, by cleansing the external meatus and withdrawing the urine with a catheter we can exclude the possible source of error.

Rest: A Neglected Factor in the Treatment of Gastro-Intestinal Disorder.

Dr. C. D. Spivak (Denver Meeting American Medical Association) said:

All of our organs manifest periods of action and repose, some absolutely rhythmical and others intermittent. Rest can be defined as nature's prophylactic. It not only prevents the further breaking down of tissues, but it affords chances for the tissues to store up new energy. The two periods of rest and activity must remain in a direct ratio in order to maintain an equilibrium. Nature insists upon rest "even to the extent of inflicting a twinge of pain on such as disobey her precepts." The surgeon and the neurologist have monopolized rest, the physician uses the whole pharmacopeia first, last and all the time.

Dr. Spivak wished to emphasize the importance of this much-neglected therapeutical agent in the treatment of gastro-intestinal affections. The physician has washed, scoured, scratched, punched and electrified the stomach, and is looking forward to the time when he can do the same for the duodenum. These things are all well enough, but the stomach and intestine are in no way different from any other organ in our body. There seems no reason why a bruised limb should be kept at rest, and not a stomach when it is in the same condition. There seems no reason why we should apply the Wier-Mitchell rest-cure to neurasthenia, and not to nervous dyspepsia. The only redeeming instance where the rest cure is applied to the stomach is in cases of ulcer of that organ. A surgeon does not draw a line of demarcation between an ulcerated, broken, bruised, or simply an inflamed limb. Rest is the 'sine qua non' treatment. In the stomach, from a simple inflammation to a solution of continuity, the process, both pathological and reparative, is the same. Then why not apply, among other things, the same remedy?

Rest may be applied to the stomach in the following ways:

1. Rest in bed—absolute rest in bed. Sitting is not allowed under any circumstances. The bowels are regulated; the bedpan used. The whole body is sponged every morning. Isolation and massage are also employed if the judgment indicates such measures. 2. Diet. Abstinence is the best bill of fare in many severe cases of gastro-intestinal disorder. Two, or even three, days' fasting will do no harm in cases of ulcer, dyspepsias and diarrhœas of all kinds. Nutritive enemata can be employed where longer fasting is indicated. If food is given by the mouth, it should be given in small quantities, no matter whether liquid or solid, and at regular intervals. The quality and quantity of the food must be suited to the individual. 3. Poultices. It is difficult to formulate a theory as to the action of poultices, but it is certain that they allay the peristaltic movements of the stomach, and make the patient feel comfortable and at rest. In severe cases the poultices are applied constantly day and night for one or two weeks; in milder cases from six to eight hours daily.

CONCLUSIONS.

1. Rest is indicated in all dyspepsias, the underlying cause of which is a deranged nervous system. 2. It is indicated in all cases where abdominal pain is present. 3. In all cases of acute and chronic diarrhœa. 4. In hemorrhage of the stomach or intestines. 5. In all tubercular cases suffering from disturbed digestion, be it stomach or intestines, and especially those having a vacillating temperature record. The rest cure is indicated in 90 per cent. of all tubercular cases. 6. So far as I know there is no disease of the gastro-intestinal tract where rest is not indicated.

The Soldier and the Medical Department of the Army.

The Medical Record seems to be very much agitated over the way the medical service has been conducted during the war. The following is one of its recent editorials touching upon this subject:

Notwithstanding the complaints of the entire press of the country regarding the neglect of the sick and wounded in our late battles, the secretary of war seems to be content to dismiss the whole subject with the statement that whatever occurred was to have been expected, and that in reality no one was to blame. In other words, he wishes it to be understood that there was no way to prevent the sending of transport ships loaded with soldiers and without medical supplies or surgeons, the crowding of soldiers into quarters not fit for cattle, and the neglect of the sick and wounded, exposed as they were on the battle field for days together without medical or surgical assistance. It is hardly warrantable for him to say that these are not facts, even if they were based only on newspaper reports. The surgeon-general of the army, in the last issue of the Medical Record, in answer to our former queries, makes from his standpoint an excuse for shortcomings in his department, but does not wholly explain why such excuse should have been necessary. The dreadful fact stares every one in the face that the poor soldiers, who had a right to expect everything from a country for which they were willing to sacrifice their lives, really did not receive as good treatment as would have been given to ordinary cattle under like circumstances. Close and filthy quarters, bad food, and foul water were the disgraceful incidents connected with the incoming voyage of one transport after another. These were hardly the ordinary accidents of war, considering the ample time allowed the authorities for preparing for such emergencies.

Every one having responsibility in the premises is ready with some sort of excuse, but none seems to be able or willing to discover the guilty parties. The surgeon-general, in a measure, accounts for the misery and suffering of the sick and wounded by saying that the medical supplies were left behind at Tampa. Whose business was it to have prevented such a gross neglect of ordinary duty? If the general of the army is to blame, he certainly should be called upon to add his quota to the long chapters of explanations from other army officers. Who was the medical officer in charge of these supplies, and why did he not protest at the right time and in the right way as soon as he discovered the true nature of the situation? It was his business to remind his superior officers of the facts, and thus absolve himself from all responsibility in the matter. But apparently he said nothing until called to account by the surgeon-general and then he throws the blame on the commanding officer at Santiago. But General Shafter says the entire responsibility rests upon the medical department.

It seems proper and just, and it ought certainly to be possible, that the blame should be fixed directly on some party who can be proved guilty by a properly conducted and reasonably exhaustive examination into all the facts in the case. Even the secretary of war cannot hush up a

proper inquiry because he may for reasons of his own think that it would not be either interesting or instructive. It has not yet been made clear why some of the transports came to New York without medicines, and in one or two cases without surgeons. Surely the commander-in-chief did not leave the surgeons side-tracked at Tampa along with the quinine pills. This sending of sick troops on a sea voyage without surgeons, medical supplies, or even digestible food is too serious a matter to be dismissed with a mere statement that such was not the case and that all the newspapers misrepresented the actual condition of affairs. Those at the front who had the matter in charge should throw some light on the whys and wherefores of such lamentable results. The surgeon-general still owes it to the public, to the profession, and to the noble, faithful, and energetic members of his corps to urge the fullest investigation into all the facts, and to answer still more effectually than he has thus far done the widespread criticism of the management of his particular department. We have some facts, but many more have still to be presented before the real blame can be made to rest where it should properly belong.

The Relation of Acquired Syphilis to Insanity.

Dr. W. R. Dawson concludes his article upon this subject in the Journal of Mental Science with the following classifications.

The insanities of syphilitic origin he divides into three main classes, with subdivisions:

Class I. Insanity of early syphilis (primary and secondary.) (a) Acute toxic insanity (analogous to delirium or mania a potu.) (b) Melancholia with or without dementia, probably due to cerebral anemia.

Class II. Insanity of late (tertiary syphilis. (a) Insanity due to syphilitic disease of the base and vessels. (b) Insanity due to syphilitic disease of the convexity.

Most, if not all, cases of cerebral syphilis in which insanity has been caused by epilepsy will fall under the second head (b), but should rather be classed with epileptic insanity, being only indirectly due to syphilis

Class III. Metasyphilitic (parasyphilitic) insanity. (a) Insanity of tabes (so far as due to other than "moral" causes). (b) General paralysis of the insane.

The classification only includes cases in which there is certainly, or probably, a gross anatomical change at the basis of the mental symptoms. But it is obvious that there are various indirect ways in which a disease like syphilis may produce morbid action in unstable minds. Such are the fear of contracting the disease; the worry, remorse, and anxiety produced by its existence; and the pain, insomnia, and other sensory symptoms so common in its course. With this class of cases, being but the indirect result of the disease, and in no way particular, no attempt has been made to deal.

A Suggestion to be Used in Abdominal Incision.

Schenk (Int. Jour. Surg., vol. 11, no, 6) says in performing laparotomy he has noticed that, after the abdominal incision has been made, it frequently occurs that from the constant introduction and manipulation of the fingers through the abdominal incision, the peritoneum becomes separated, to a greater or less extent, from the muscular tissue. Appreciating the fact that several complications can arise from this condition of affairs, the idea suggested itself to him to introduce a stout ligature through the center on either side of the incision, about half an inch form the margin of the wound, this ligature being first tied snugly, and a loop of from four to six inches allowed to remain beyond the first knot. We accomplish by this procedure two results—firstly, we prevent the separation of the peritoneum from the tissues overlying; and secondly, we have two retractors which take up no room and cause less traumatism than the ordinary mental retractors. When the operation is completed, the ligatures are clipped and removed, and the wound brought together according to the method adopted by the surgeon.

Unprofessional Conduct of an Army Surgeon.

Dr. G. A. Baxter, has preferred charges of conduct unbecoming an officer and a gentleman against Major Surgeon Samuel D. Hubbard, of the Ninth New York Regiment. The specifications are that Dr. Hubbard "cursed and swore" at Dr. Baxter and other Chattanooga physicians who had been called to attend Sergeant Frank, of the Ninth New York, who was recently injured under the wheels of a moving railroad train; that Hubbard had removed Frank, who was in a state of profound shock from his injuries, against the protest of Baxter and other physicians, and that as a consequence Frank died on his way to the division hospital, losing the only chance he had of recovery by being improperly handled." The charges were filed with General Breckinridge to-day and an investigation and trial will be ordered.

Condylomata Acuminata.

Dr. A. H. Ohmand-Dumesnil contributes an illustrated article to the Tri-State Medical Journal for August, 1898. The following is an abstract:

Condylomata Acuminata, or venerhal warts, are frequently seen about the genitalia of both males and females. They have also been denominated cauliflower growths, and the general opinion is that they are of venereal origin. Although this is true in the majority of cases, there exists a sufficient number due to different causes to call for a word of correction in this regard. It is for this reason that the name, venereal warts, should be abandoned, or an explanatory nomenclature established by which the name would give more definite and explicit knowledge of the matter in hand.

The term condyloma acuminata is, perhaps, not as good a one as could be found, as it is in itself a negation of terms. As ordinarily understood, condyloma almost always implies a flat growth; so that when it becomes acuminate, we are told that it is a pointed flat excrescence. On the other hand, the term venereal wart is not only misleading, so far as the origin of the trouble is concerned, but its form is not always verrucous. Cauliflower excrescence is a name applicable to certain forms only, whilst cock's-comb growth is also similarly restricted in application. The formation is essentially a papilloma, and one which is very vascular always, due to some irritative process. To embody these different characteristics in one name, such as irritative vascular papilloma, would confront us with an unwieldy name, which might, in addition, be open to adverse criticism. It would certainly be better to agree upon some short name and adopt it as a term expressive of the condition, and so defferent from others that there could be no possibility of a mistake. Aside from these purely theoretical considerations, the condition is one which possesses much interest, more especially from a therapeutic point of view, the rapid cure of the condition and the prevention of relapses not being always so simple a matter as we might be led to suppose from the off-hand manner in which it is disposed of by many authors. There are cases which sometimes arise that are, apparently, stubborn to all ordinary forms of treatment, and which call for radical measures; whereas, in other cases, the most simple means will bring about the most successful results.

There are various forms of condylomata acuminata, but they all possess some features in common. In the first place, they occur in the anogenital region or about the genitalia. Secondly, they have the faculty of growing rapidly and quite luxuriantly. In the third place, moisture is a necessary adjuvant to their growth. Finally, they are always attended by a marked odor which is foul, and whose intensity seems to be in direct proportion to the size of the growth. No reason has yet been given which can satisfactorily account for the fact that such different appearances are presented in different cases. In its simplest form we have the appearance presented which closely simulates flat warts or small, elevated wart, which arise from the prepuce or its mucous aspect, or from the glans at that portion which is usually covered by the prepuce. The growths are of the same color as the integument, and would easily pass for ordinary warts. A close examination, however, will show that they are sessile, and, if cut, will bleed profusely, more so than ordinary verrucæ. In the female these lesions are prone to show themselves on the internal surface of the labia majora, on the peritoneum, and about the verge of the anus.

A variety seen more frequently is the acuminate form, which usually begins in the form of very small growths. In the male they begin in the balans-preputial sulcus, and very rapidly acquire large proportions, becoming enormous in some instances. When they become very large they are of the cauliflower variety, and often are so large as to amount to a cupful. The pedicle in each case is rather small, but contains a blood vessel which supplies the growth and makes it very vascular, bleeding freely upon the slightest touch, almost. An example of rather well-developed condylomata acuminata in the male is shown in Figure 1. As can be plainly seen, there is a number, the best developed being at the lower part of the glans. The case was one which was of comparatively short duration, and it was unaccompanied by any particular pain, the cause of the patient applying for treatment being the discharge from his urethra, which is well shown in the illustration by the drop which is manifest at the urethra. Another peculiarity may be noticed in the illustration. The growth appears white, which is due to the glairy, mucoid fluid which covers it and which seems to be secreted by it. This, in its turn, appears to promote its further growth. As it grows the amount of secretion increases, and the entire process thus moves in a vicious circle. The continuence of the growth is easily understood when we remember that moisture is a *sine qua non*, not only to this increase in size, but to the very appearance of condylomata acuminata. It is to this peculiar fluid that the fetid odor is due, and this accounts for the fact that it be-

comes more pronounced as the growth becomes larger and naturally presents more surface covered by the secretion.

In the female the condition is apt to be much more diffuse than in the male. This is due to the fact that there is presented a much greater extent of mucous surface which is susceptible. Another reason for the larger amount of growths in the female is that the liquid secreted originally causing the growth is not limited to the vulva and its immediate environment, but it finds its way to the anus, which in its turn becomes surrounded with warts. The growths are apt to be of a mixed variety in white women, as is well shown in Figure 2. In this case there existed acuminate lesions about the anus, and in the vulva one of the cauliflower variety. In the right crural fold there may be seen a rather large, somewhat flattened lesion, which has the appearance of being more or less lobulated. This has not quite arrived to the stage of which the cauliflower excrescence is the type, but it is sufficiently well-marked to demonstrate that it is in the transition stage. Upon the right buttock may be seen a few small lesions of a sufficiently well-marked character. The dark shading about the thighs and in the internatal cleft evidences the moisture which is present and which has a very slight erosive action upon the integument. Locomotion was slightly impeded in the case shown, and this is an almost constant symptom in women, which is never manifested in men. The cause may be easily explained when we stop but a moment to consider two facts. In the

FIG. 1. Condylomata Acuminata in Male. [Acuminate Form.]

female condylomata lata occurs about the vulva and anus; and, consequently, between the thighs. In locomotion the thighs come into close proximity and even rub one another. In both sexes there is a marked tenderness in these growths upon friction or pressure. So that it is readily seen that this tenderness if not only continually elicited in women when they walk, but in hospital practice. So it is in the case of condylomata acuminata. A very good representation of a large cauliflower growth of this trouble is shown in Figure 3. It will be seen that the external genitalia of the woman who was affected are entirely hidden. The mass extended, apparently, from the mons veneris to the anus, and was quite elevated. It may be seen that it consisted

FIG. 2. Condylomata Acuminata in Female. [Mixed Verrucous and Acuminate Form.]

creases to a degree such as is never appreciated by men. Moreover, a man can protect the parts quite successfully, but a woman cannot. If she wears a cloth it only serves to heighten the pain, so that she is forced to the alternative of complete rest if she would avoid the constant misery and pain which walking entails. Another strong inducement to keep such a patient indoors is the foul smell which is present, and which becomes of so marked and fetid a character that passers-by in the street can recognize it.

It is a rather curious fact that the growths are much larger and more prominent in negroes than in whites. And the smell which accompanies them is simply awful. It would seem to be a characteristic of the negro organism that all pathological conditions are prone to take on intense forms. It is in these that tumors become largest, that malignant processes become most virulent, and that destructive processes are most extensive. This may be due, in large part, to the fact that they are more careless, or wait longer before seeking medical advice. Be this as it may, such cases are being continually met with, more especially

of several masses closely crowded together, although, as a matter of fact, they had comparatively small pedicles. Disseminated upon the left side, through the internatal cleft and between the tumor-like masses, were a number of smaller papillomata in a fair way of becoming larger. The reason they appeared upon the left side will become apparent when it is stated that the woman lay upon that side, thus giving an opportunity for the masses to produce moisture there and consequently favor the growth of new papillary excrescences. The case is not an exceptional one, so far as appearance is concerned. Any one who has had any experience in the venereal divisions of female hospitals will have seen such examples numbers of times. The patients themselves pay but little attention to their trouble until it attains such enormous dimensions as to be repulsive even to themselves. Many, however, are driven to public hospitals from the fact that the physician to whom they have applied for treatment seemed to be powerless, not only to cause the disappearance of these growths, but even to arrest their march.

The most common cause of condylomata

acuminata in males is chronic gonorrhea or gleet. If the patient be careful to be cleanly they are not apt to show themselves; but if he permits the secretion to find its way under the prepuce, it causes the growth through its irritating effects. And it is not about the prepuce and glans alone that these growths are found in the male. I have had occasion to note them about the verge of the anus in pederasts. They presented the typical funnel-shaped podex, and acknowledged their indulgence in unnatural practices. The active participant had a chronic gonorrhœa, which, whilst it did not infect the rectum, sufficiently irritated the little hope can be held out of the ultimate disappearance of the growths. Occasionally a simple drying powder, locally applied, is sufficient to cause the warts to dry up. A good form is champho-phenique powder, which is antiseptic and disinfectant as well. But cases occur not infrequently in which such a simple procedure will not succeed. In such a case a good method is to snip off the growths with scissors and cauterize their bases with chromic acid. The power mentioned above may then be employed for a dressing. The utmost cleanliness must always be observed, and the non-affected parts must be keep dry. If this is not done

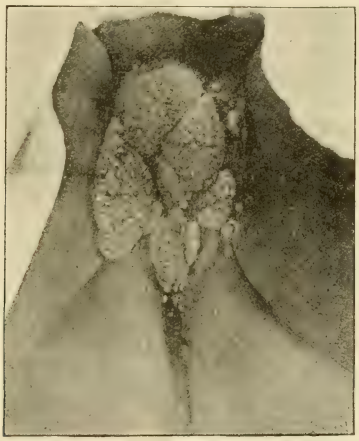

FIG. 3. Condylomata Acuminata in Female. [Cauliflower Form.]

margin of its outlet to produce the growths. Gonorrhœa in its acute form, however, will also produce the growths. In women, on the other hand, it is not always gonorrhœa in its acute or chronic form which is always the cause of the lesions. A vaginal leucorrhœa will also give rise to them, and it is a prolific rource of the trouble. However, it must be remembered that in the non-venereal forms of this trouble the growths are never as luxuriating as when due to gonorrhea. This is in itself a valuable indication pointing to the necessity of examining for the gonococcus, in order that there may be no mistake made in the etiology of the trouble.

So far as treatment is concerned, the cause should be attended to as well as the growths. Every effect should be made to cause the gonorrhœa, gleet, or leucorrhœa, to disappear. In any event, this part of the treatment should be thorough, or but there will be a new proliferation of the fungating mass. Some prefer using the stick nitrate of silver to cauterize the base, but it is not as efficient as chromic acid and requires repeated applications. Others, again, employ fuming nitric acid or acid of mercury. but the pain elicited is too intense, and the destructive effects are often quite marked. For these reasons chromic acid is much preferable. One precaution to observe in its use is to see to it that the cauterization is thorough. It need not necessarily be deep, but it must cover the entire surface from which the condylomata arise. No hesitation need be manifested, for no scars will arise if the method be properly carried out.

A treatment which I have employed upon numerous occasions with perfect success is not only thorough but simple of execution. It is not particularly painful if carefully done. It consists of wiping dry the condy

lomata acuminata, taking care that they do not bleed, as a preliminary. The next step is to touch the growths with a twenty-five per cent. solution of pyrozone. The application, however, must be thorough. It must be applied until there is no longer the formatiou of bubbles; and one point to be particularly observed is not to touch the unaffected mucous membrane or skin, as, in that event, an intense pain of a transitory character is elicited. Whilst the application should be thorough, this does not necessarily imply that a large amount of the liquid is to be used. The remedy must be carefully handled, as it is destructive to clothing; and whilst it is very painful to the normal tissues, it does not destroy them nor produce scars. In the case of condylomata acuminata one good application is generally sufficient, and more than two have never been required in my experience. After the application of the remedy the growth shrivels up, then dries, and finally drops off in the course of a few days without leaving any evidence of its former presence or of the action of the remedy.

In the trouble under consideration the prognosis is always a good one, and results both appreciable and grateful to the patient can be readily obtained, providing that the proper treatment is given and the details scrupulously carried out. If these conditions are not faithfully adhered to, relapses will readily occur; and the case with which such occur would seem to argue that there exists a certain predilection to the trouble in some individuals. This is further confirmed by the fact that others, both males and females, having the same genital affections, never exhibit condylomata acuminata, although what may be regarded as the essential cause has existed for long periods of time without improvement and without any particular care being given to cleanliness or keeping the parts dry.

How much Sleep does a Grown Person Require?

Different persons will require different amounts. Some persons seemingly do not need more than five or six hours of regular sleep. The majority, however, need eight hours. The amount would be governed considerably by the general state of nutrition of the body, and the character of the exercise which has produced the need for sleep. What is necessary to be accomplished in the sleeping hours is the building up of the nervous centres and other centres of the body, and to repair the waste that has taken place during the day. If the state of nutrition is good, and there has been a healthy working of the nerves during the day, with such a degree of physical exercise as has left the circulation of the body in an even balanced condition through. out the entire system, the process of repair and restitution will go on readily and rapidly. On the other hand, if the individual is suffering from dyspepsia, and his body is filled up with poisonous products, either from digestive trouble or from lack of appropriate exercise, then the repairing processes during sleep will be unhealthy, and a longer time may be required to establish a less sound state of the nerves, than with such individuals where the conditions are more nearly perfect.

Vaginal Incision in Cases of Pelvic Suppuration.

The freedom with which abdominal surgeons now enter the peritoneal cavity by the abdominal route has led most operators to select that method of dealing with which some years ago they would have feared to attack, except by vaginal incision and drainage. The former method allows the affected organs to be completely explored, and suppurating sacs to be often removed in their entirety. And further, the fear that septic peritonitis might follow the soiling of the peritoneum by the escape of pent-up pus has proved to be to a great extent groundless; this is always due to the fact that, the majority of such cases being chronic, the pus, though often fœtid, is clinically non-infective. Vaginal incision in such cases has come therefore to be looked upon as the resort of the timid operator. There is something to be said in its favour, however, as Dr. Phocas points out. He adopts the following table of indications for vaginal incision, formulated by Bouilly: (Treatment Aug. 25 1898).

1. In cases of acute suppurating cellulitis, the abscess being opened at the most bulging spot. 2. In cases of suppurating hœmatocele. (This class includes hæmorrhage into both the broad ligament and the pouch of Douglas.) 3. In cases of collections of pus in the pelvic peritoneum following puerperal or gonorrhœal infection. 4. In some cases of suppurating inflammation of the uterine appendages, especially acute cases, when the general condition of the patient interdicts the graver operation of abdominal section.

The method advised by the author is to open the pouch of Douglas in the same manner as for the second step in the operation of vaginal hysterectomy as performed in this country, and he records three cases dealt with by himself, in which the results

were very satisfactory- One of the three is of special interest, because it could hardly have been attacked with any chance of success by the abdominal route.

The patient was a unipara, age 30, who had "suffered from the womb" for several years; lately she had experienced violent attacks of abdominal pain, and had been forced to keep her bed. When seen the abdomen was much distended, the temperature high, and the general condition grave. Through the left fornix was felt a large mass continuous with the uterus. The posterior fornix was opened and drained, and in thirty days she left the hospital cured.

Dr. Phocas recommends that the pus-cavity be gently packed with iodoform gauze, and warns operators against attempting to springe it until three or four days have elapsed, otherwise limiting adhesions may be broken down, and general infection of the peritoneal cavity may ensue. The gauze drain may be changed in from twenty-four to forty-eight hours.

The disadvantage of vaginal incision lies in the fact that it may be an incomplete procedure, and afford only temporary relief. Thus, in the cases of a suppurating multilocular ovarian cyst, one suppurating loculus may be opened, but the nature of the case being unrecognised, the remainder of the growth is left, and this will certainly give trouble later on. If it is fairly clear, however, that the purulent collection is in the peritoneal cavity or the broad ligament, vaginal incision is often useful.

"Immunes" and Yellow Fever.

In a leading article on The United States Marine-Hospital Service and Yellow Fever in our issue for August 20th we stated that we were somewhat skeptical as to one attack of yellow fever always insuring immunity against a further attack of the disease. (N. Y. Medical Journal, Sept. 3d, 1898.) We quoted, moreover, two cases—one of a British army medical officer who contracted the disease a second time on returning from a visit to Europe, the other of an American who was attacked by the disease three times. We further prophesied that light would be shed upon the reputed value of this immunity by the regiment of "immunes." The issue of the Medical News for the same date says that the fact that a number of men, who had survived an attack of yellow fever, enlisted and went to the front with the full assurance that they could face the dread disease with impunity, have been attacked with yellow fever, and some of them even died from it, has put a new phase upon the significance of the word immune. This journal further states that it is quite possible that life in a northern climate so renovates the system after an attack of yellow fever as to interfere with the proper balance between the toxines and antitoxines, and so destroys the security against a second attack. This was mentioned by us as being the case with the British officers referred to. We have no doubt that relative immunity in some degree is conferred by one attack of yellow fever; but we assert once more thst it is only relative, and we can not but emphasize our exception to the universality of Surgeon Murray's assertion, in the government monograph on *Yellow Fever*, that "one attack always insures the afflicted one that he is hereafter immune."

Acidity of the Stomach.

As the late distinguished Dr. Flint has observed, the mass of laboring men are free from dyspepsia, while the indoor workers, students, and the like, are particularly subject to it. The natural and very correct inference is that if the latter class would bring their habits of life a little more into keeping with the occupation of laborers it would tend to eradicate their dyspepsia. As a general thing, the student, the office man, the thinker indoors is an over-fed individual. Among those with good physique, over-feeding tends to promote gout, a condition wherein an acid is evolved in the blood, and unites in the joints with soda, forming there a compound. Rheumatism is likewise a condition in which there seems to be an acid in the system, tending, as in the case of gout, to irritate and inflame the joints. Gout is the slow outcome of over-feeding; rheumatism is accelerated by certain atmospheric changes; and acid dyspepsia is the immediate outcome of over-feeding (or of want of exercise). It occurs to the writer that if the stomach be very strong, or digestion fillipped, as with stimulants, &c., the acid condition might show itself otherwise than in the stomach—for example, upon the skin in the form of eczema.

A most common form of dyspepsia is acidity, in which, when a little of the gastric contents is regurgitated, it burns the throat like a corrosive acid. It likewise burns the stomach so that the pain sometimes becomes intolerable, and, strange to say, it ofttimes subsides if the patient lies down, for the recumbent posture alters the position of the fluid in the stomach. Occasionally eating freely will bring ease and relief—indeed, it seems to start digestion afresh and effectively.

It has been frequently pointed out that the victims of cancer of the stomach are frequently those who have suffered long from dyspepsia. Advancing knowledge has led to the conclusion that an injury or a protracted irritation is a frequent precursor of cancer. The presence of a burning liquid in the stomach, day after day, should be, and doubtless is, a frequent cause of cancer of this organ.

"But," says one, "I am busy all day—what am I to do?" Walk out in the evenings; never go to bed on a full meal without having had a walk. Further, carry something of some weight in the hands, for walking alone is not sufficient. We know a man who keeps acidity of the stomach at bay by walking every night after dinner with a bag full of books in his hands. The books exercised the arms, the walking the legs. Tricycling and bicycling are admirable exercises, and as to horseback riding, Lord Broughton said: "The outside of a horse is the best thing for the inside of a man."

How about medicines? is a pertinentinquiry. They are pallative in acidity of the stomach, but will no more compensate for a deficiency of exercise than for an insufficiency of air or light. Magnesia carbonate is most useful, say, in doses of five or ten, or even twenty grains, in a wine-glass of water. To relieve at once, soda bicarbonate is doubtless unequalled; from six to twelve tabloids may be taken at a dose. The difficulty with soda is that it does not tend to cure so effectively as the potass, bicarbonate does. We have known of many cases of dyspepsia deriving the very greatest benefit from the latter.

Non-Medicinal Methods of Treatment.

In his opening address before the last Congress for Internal Medicine, Professor von Leyden gave expression to the following sensible views:

"To-day we are conscious at the bedside that we have not simply to treat the disease, but chief of all the patient himself, and that he is indifferent to nothing, not even the slightest thing; nothing is adjusted at the bedside in the right way of itself; the physician has to see to everything, and not infrequently the so-called simple remedies are the ones which possess the power to hold together the delicate thread of life and again to fortify it. Medicine of to-day no longer rests upon a fixed system and no longer draws from a single source. Its remedies and methods have been multiplied and extended to an astonishing degree. What formerly appeared of secondary importance has now risen to a position of prominence. Numerous therapeutic measures arise to demand recognition. Our therapy is no longer exclusively based upon medicaments and prescriptions. We know that the task of the physician is not finished when he has written his prescription *lege artis*. He must make a more critical and thorough investigation of his patient's condition. We are convinced that many patients recover without medicine, and that many diseases are healed by other means."

The Stages and Forms of Syphilis.

Adami (Canadian Practioner, August,) concludes an interesting paper as follows:

I have, I believe, mentioned the main manifestations of syphilis as they occur in the infant and in the adult, and it will be seen:

1. In the first place that the lesions, occurring in the congenital and the acquired disease, are identical, and are brought about by the same process or processes.

2. That, whether we have to deal with the disease in the secondary or in the tertiary stage, the same processes are at work. That, if we accept those cases as truly tertiary in which we have to deal merely with the fibroid remains of obsolete gummata, and again those cases in which there is perihepatitis (which perihepatitis appears to be a complication rather than the genuine and direct result of syphilis), then we are bound to admit that the study of the liver alone would indicate that no sharp boundary line can be made out between secondary and tertiary syphilis. No more can we make out such a boundary between secondary and tertiary tuberculosis.

While I and all others must admit the utility of recognizing these two stages, from an anatomical and histological standpoint one is forced to acknowledge that progressive syphilis is characterized by the same succession of phenomena whether it is studied but a few months or long years after the primary infection. Anatomically and histologically there is no valid distinction to be drawn between secondary and tertiary syphilis.

It may be asked whether such a conclusion is not wholly at variance with clinical opinion and experience? Upon the face of it, it is—but, if the subject is looked into carefully. I think that such a view will reconcile a few of the divergences existing among syphilologists. We have those and they are the majority) who state that tertiary syphilis is non-infestious, and those who bring forward clear examples of the production of infection five or ten years

after primary inoculation of the disease. This difference can be reconciled if we agree upon the following points:

1. That nowadays, under proper treatment, syphilis, if not a self-limiting disease, is at least a disease which can be healed, so that many of the lesions recognized as being tertiary syphilis are truly the indications of the old healed syphilis, and not signs of progressive or latent disease.

2. If the disease has not completely died out, and remains latent, the resistance of the tissues of the organism is such that in the majority of cases, if it does not tend to light up again, there is so considerable a local reaction that the infection and consequently the spread of the process tend to remain strictly localized, and the germs (which are probably of bacillary nature) do not become disseminated through the blood. Thus neither the blood nor the secretions contain the virus.

3. In a very small number of cases the reaction on the part of the tissues may be so lessened, and the virus retain or gain so high a virulence, that either it causes ulceration, or in other ways becomes disseminated and capable of causing infection even late in the tertiary stage.

The Congress of Tuberculosis: Resolutions

The Congress of Tuberculosis came to an end on August 2d, when the following resolutions were passed: The Congress considering that contagion constitutes by far the most important cause of human tuberculosis, and that sputa dried and reduced to dust are the most effective agents of contagion, makes the following recommendations (British Medical Journal, Aug. 20, '98): 1. That until the time arrives when tuberculosis will be included among the contagious diseases the notification of which is compulsory, all places open to the public should be provided with hygenic spittoons, and with a conspicuous notice forbidding expectoration anywhere else than into these receptacles. 2. That the public authorities show the example by ordering the carrying out of this measure with the least possible delay in all places under their jurisdiction, and especially in schools of every class; this is the most vital point in the reform. 3. That tuberculous patients should not be sent to convalescent homes open to persons suffering from other diseases. 4. That homes should be established and spedially reserved for convalescent children. 5. That a "medical committee of initiative" for the establishment of popular and gratuitous sanatoria should be formed. 6. That the private initiative of the medical body, and the initiative of the public imitating the example already set in France and in other countries should lead to the creation of the largest possible number of sanatoria. 7. That the Minister of Public Instruction and the department of Public Hygiene in the Ministry of the Interior encouraging by an official patronage the courses of instruction in hygiene which the League against Tuberculosis is now organizing in Paris in each *arrondissement*, with the idea of extending this movement to the other towns of France. 8. That the permanent Committee of the Congress make an official application to the general management of the Universal Exhibition of 1900 to bespeak its interest in the work of prevention of tuberculosis by studying, in conjunction with the Committee, the form in which instruction should be given to visitors to the exhibition as to the means whereby tuberculosis is contracted and can be avoided. 9. That periodical international meetings be held for the study of tuberculosis, especially its prophylaxis. 10. That Governments should endeavor to devise means of preventing or repressing the fraudulent use of tuberculin for the purpose of concealing the existence of tuberculosis in animals intended for sale or exportation. The Congress further considering that the constant increase of tuberculosis of bovine animals gravely threatens public health and wealth, and that contagion is the sole truly efficient cause of this increase, affirms the urgent necessity of legislative measures enjoining (*a*) the separation of diseased from healthy animals; (*b*) the prohibition of the sale of diseased animals except for butcher's meat; (*c*) the supervision of cowhouses devoted to the production of milk intended for public use as food, and the immediate slaughter of every cow affected with tuberculous mammitis; (*d*) the sterilisation or at least the pasteurisation of milk intended for the production of butter and cheese on a large scale; (*e*) the generalization of the service of inspection of butcher meat on a plan more or less analogous to that which has been in operation in Belgium for several years.

Clear Complexions in Connection with Phthisical Tendencies.

The Archives of Surgery, in commenting on this subject, says:

The three Misses Gunning, so renowned for their beauty and their successes in marriage, all died of consumption.

Horace Walpole, in a letter dated August 1, 1760, writes: "My Lady Coventry is still alive, sometimes at the point of death, sometimes recovering. They fixed

the spring; now the autumn is to be critical to her." This latter prediction was realized. On October 5th Walpole wrote: "The charming Countess is dead at last; and as if the whole history of both sisters was to be extraordinary, the Dutchess of Hamilton (Elizabeth Gunning) is in consumption too, and going abroad directly. Perhaps you may see the remains of these prodigies; you will see but little remains. Her features were never so beautiful as Lady Coventry's, and she has long been changed, thought not yet, I think, above six-and-twenty. The other was but twenty-seven."

The popular belief that clear complexions, bright eyes, and silken lashes imply delicacy in the direction of tuberculosis need not in the least conflict with modern knowledge as to the bacillus. They reveal the tissue-peculiarities which favour its growth.

Bacteria of the Vagina and their Practical Significance. Based upon the Examination of the Vaginal Secretion of One Hundred Pregnant Women.

Dr. J. W. Williams, of Baltimore, presented this paper at the June meeting of the American Medical Association:

In explaining the varying results obtained by different investigators, the author considered this fact due to faulty technique in obtaining the secretion for examination. The utmost care is necessary not to carry germs into the uterus from without and in his observations the most rigid precautions were carried out to prevent this. The external genitals were first thoroughly scrubbed and disinfected: then, with the labia held apart by the fingers of one hand to prevent contact with the instruments, a sterile glass tube was introduced into the vagina and the secretion sucked up into it by means of a syringe attached to one end. The glass tube was then sealed at both ends in order to protect it from outside contamination until the time of examination arrived. As a result of the investigations made the following conclusions were drawn:

1. That, as found by Kronig, the vaginal secretion does not contain pyogenic streptococci, or staphylococci aureus; therefore ante-partum douches are unnecessary. 2. That the discrepancy in the findings of different investigators is to be found in the technique of obtaining the secretion. 3. That as the vagina does not contain pyogenic streptococci or staphylococci aureus, auto-infection is impossible; if these germs are found in the vagina during the puerperium, they have been introduced from without. 4. That if the vagina contained streptococci, as frequently stated by Walthard, Valile and Kottman, vaginal examination with the sterile finger would be very dangerous, which is not the case. 5. It is possible that in rare instances the vagina contains bacteria which may give rise to sapremia and putrefactive endometritis, which are usually mild and do not lead to death. 6. That death from puerperal infection is due to infection from without, and is usually caused by the neglect of antiseptic precautions on the part of the physician, for in all instances save one the bacilli found in the uterus were different from those in the vagina.

Toxemia in Heart Insufficiency.

In a recent issue of "Medicine" appears an abstract of a paper by Eichhorst in which attention is called to certain nervous symptoms that sometimes arise when the heart becomes competent after having been insufficient for some time. In favorable cases of heart incompetency, it is observed not infrequently that under the influence of rest and digitalis the daily quantity of urine may be increased from a few hundred cubic centimeters to 5,000 or even 7,000 cubic centimeters, within a very few days. The urine then gradually diminishes to the normal quantity. During this time the œdema of the extremities, and the transudates that have occurred in the serous cavities, disappear rapidly. Coincident with the markedly increased excretion of urine, Eichhorst has observed, now and then, peculiar nervous symptoms which he ascribes to a form of autointoxication. The first manifestation of this condition is usually apathy, often terminating in profound somnolence. At times great mental confusion is present, which may advance to active or even violent delirium. The pupil is usually contracted. The respiration is often very rapid and deep, without any apparent obstruction in the respiratory passages. The face is not cyanotic, but on the contrary active congestion is often present. Convulsions have not been observed by Eichhorst. The symptoms described may be of short duration or may continue for more than a week. They pass away as the œdema disappears and the urine diminishes to the normal quantity. Albumen was not found in the urine in any of the cases, so that the uremia of kidney disease was not present. In Eichhorst's opinion the symptoms are due to the action of toxic substances contained in the transudates absorbed by the circulation. Like the toxins in uremia, these substances exert their chief effect on the cen-

tral nervous system. To determine the exact nature of these poisonous products remains for future investigation. It is not necessary to withdraw digitalis when these toxic symptoms appear.

Treatment of Inoperative Sarcoma by Coley's Fluid.

Dr. Mansell Mouillin (British Medical Journal, Feb. 19, 1898), offers the following conclusions:

1. It could not be denied that there was a considerable number of cases in which sarcomata that had been given up as hopeless, often after repeated operations, had absolutely and entirely disappeared after this method of treatment. There was no other treatment, except infection with the streptococcus of erysipelas itself, of which this could be said. 2. Some of these cases had remained free from recurrence for upwards of three years, the period which, in the case of the excision of the breast for scirrhus, was regarded by many operators as justifying the use of the term "cured." 3. Several of the cases in which sarcomata had disappeared after an attack of erysipelas had remained free for seven years and upwards. 4. The fact that there might be a very few cases recorded in which sarcomata had disappeared, either spontaneously or after such diseases as acute specific fevers, had nothing to do with these conclusions (the statement that sarcomata did occasionally disappear was repeated with regularity, but well authenticated cases, verified in the way in which Coley's had been verified, were difficult to find). 5. These conclusions were not in any way invalidated by the fact that injections of the toxins were sometimes followed by the disappearance of other growths, such as lupus, keloid, syphilitic deposits, carcinomata, etc. It might make the disappearance of sarcomata more difficult to understand, but in no way disproved it. 6. The proportion of cases of sarcomata that were cured by the injections of mixed toxins depended, among other things, upon the histological character of the growths. Spindle-celled sarcomata were by far the most successful. This suggested the conclusion that the mixed toxins had a selective action, even if it was not specific. 7. The disappearance of sarcomata was not due to inflammation, but to an intensely rapid form of fatty degeneration, comparable only to that which affected the hepatic cells in acute yellow atrophy of the liver. Inflammation and sloughing, when they did occur, were septic complications. 8. Degeneration and absorption might occur whether the toxins were injected directly into the tumor or into some distant part of the body. In the former case the effect was more rapid and the constitutional symptoms severe. 9. The method was attended with considerable degree of danger. It should therefore be adopted in those cases where there was no other remedy. The chief risk seemed to be from collapse and pyæmia. There must always be danger of the latter if there was a suppurating or sloughing sore. It might be argued that patients whose lives were threatened by a malignant growth would never be cured by any remedy that did not involve some such degree of risk. 10. The cultures were of no use unless taken from a virulent case of erysipelas, or were made virulent by passing the streptococcus through rabbits. 11. The bacillus prodigiosus, in spite of the theoretical objections, had the effect of immensely increasing the reaction. 12. The effect was most striking in the case of rapidly growing sarcomata. Slowly growing ones seemed to have much more resistance. Probably this meant that the masses of embryonic cells with little organization gave way to injurious influences more readily than those that were more closely knit together. 13. Patients often gained in weight and strength while under treatment. 14. Treatment should be continued until the growth had vanished, or until it had become so small that it could be removed. 15. If there was a recrudescence of the disease it did not follow that the toxin would be as efficacious the second time as the first. Whether this was the result of tolerance being established could not be said. 16. Recurrence in other parts of the body might take place after many years. 17. The severity of reaction was very variable. Probably this depended upon the rapidity with which the injection was absorbed, rather than upon any cumulative action it might possess.

The Need of Watching Children's Associates.

Dr. J. W. Hauxhurst, (Medical Record, Aug. 13, 1898) makes some very readable statements regarding Venereal Diseases; their Relation to the Public Health, to Society, and to the Physician. Dr. Hauxhurst says:

A girl of twelve years, whose father and mother are respectable but heedlessly indulgent with their children, was brought to my office with a vaginal discharge. The case read gonorrhœa in every particular. Several days from the time I first saw this girl a fine little boy of six years came with his mother to my office to be inspected for

a discharge from his penis. A Christian woman, devoted to her children to the verge of self-sacrifice, the mother was at first disposed to regard my statement that her boy had gonorrhœa as an insult to her. It was true, and the case was obstinate to treat. The boy's home is only a block from where the girl I was treating lives, so I sought to relate them by tracing association between the two. I could not nor could her mother with all her cunning. Within a day or two from this second discovery I attended a woman in labor, living two blocks from the boy. I was informed on this occasion that her little girl of ten years complained of a discharge that made her sore. Here was gonorrhœa again, and under circumstances which aroused me to a determination to find how it came in this neighborhood, and why it should be with such young persons. I conferred with the little boy's mother, and she had no trouble to get his simple story of the immodest behavior of this second girl with him. I returned to the first girl on a new tack for the history of her infection, and traced it to a girl of eighteen years, whose reputation for depravity went unchallenged, and whose diseased condition at the time was a theme for raillery with her companions. She lived but a block from these two young girls, and, as if to attain the culmination of her wickedness, or to grasp an opportunity to avenge the loss of her own chastity, she enticed them together to her room and there taught them in their youthful innocence their first lesson in immorality; and with her instructions she communicated to them a disease of more consequence to be rid of than mumps or the whooping cough, one having qualities that render it more dangerous to the public health and society than chicken pox or the measles, one which every respectable physician thinks of with disgust, and examines with greater dread than he does either typhoid fever or consumption.

Why Not Grant Him a License?

The Memphis Medical Monthly is responsiele for the correctness of the following item:

There recently appeared before the Clay County, Arkansas, Medical Examining Board an applicant for license to practice. This applicant claimed to have practiced medicine up to within the last two years in the State of Illinois, and before going to that State had followed the same calling for fourteen years in Kentucky. Through the courtesy of the secretary of the board, Dr. W. H. Hubbard, of Piggot, Ark., we have had the opportunity of examining the papers containing the answers to the board's questions, turned in by this experienced practitioner, and here submit a few of these, *verbatim et literatim*, as examples of the character of the whole.

Question. What is cerebral hemorrhage? Give symptoms, prognosis and treatment.

Answer. Cerebral hemorrhage is bleeding from the womb; symptoms is a bearing down sinciation of the overies, of the vagina and a Bleeding Sinciation from the womb.

treatment. Ceep the Paitent as quiet as Posibel. and Give quinia and Bor. Potach. Morphine. Nutmegs, brandyes and sometimes a Coton Pill.

Ques. What is appendicitis? Give one cause. Give symptoms and treatment in full.

Ans. Appendicitis is a Dease of febrile condeations of the systum. Symptoms is a tired and heavey feeling. Drinking Sinciation. treatment for same Morphine antifebrine and stimulents. Brandyes, wines and Egg Sups.

Ques. What is extrauterine pregnancy? Give symptoms.

Ans. Extrauterine Pregnancy sometimes occurs shortly after a Sexious intercourse. or caused by a Sudden exposure from Cold. and the Peariods Becomes unreagular.

Ques. Give the mechanism of labor.

Ans. Meachanisem of labor is a Slite Pain in the lower Parts of the abdoman Cavity Connected with the womb.

Ques. How are poisoned wounds produced? Give treatment for same.

Ans. Poison Wounds air Produced sometimes by Snake Bites, or Mad. Dog Bites. Wild Grape Vines.

treatment, Carbolic Acid, tanic acid. Opium. Morphine. Whiskeys or Wines.

With this astute learning as the result of many years practice, cannot we truly say, *experientia docet*?

Repeated Extrauterine Pregnancy.

Dorland (Amer. Jour. of Obstet., April, 1898) records a case of this rare condition. The first tubal pregnancy occurred on the left side, in a patient aged 28, who had had four children, the eldest 6 years, and the youngest 15 months. She was operated upon at about the seventh week, and the embryo was found within the tube. Her second tubal pregnaney occurred twenty months latter, on the right side. At the operation the condition was found to be an instance of Bland Sutton's tubal abortion. Dorland has found that sixteen cases besides his own are on record, including one just lately reported by Schoolfield. He gives complete references.

Arsenic causing Zoster. (A note written in May, 1876·)

Hutchinson (Archives of Surgery, July, 1899).

"Some years ago I published the opinion that arsenic given medicinally, might produce herpes zostor. No year passes without my having under observation cases in confirmation of this belief. It is of much interest to note that sometimes it occurs only after a long course of drug, which has not disagreed in the least. Indeed it is, I think, never attended by the more common symptoms of intolerance of arsenic, and the patient may resume or even continue the drug without fear of a repetition of the herpes, and without the least interfering with its usual course."

Serumtherapeutics in Yellow Fever.

Prof. Sanarelli, the Director of the Hygienic Institute of Monte Video, has made a further report of his experience in the treatment of yellow fever with a serum obtained from horses vaccinated with the bacillus icteroides. (British Medical Journal).

The horses were inoculated with a virus of gradually increasing intensity for a period of from twelve to fourteen months. The serum was used in the case of eight patients by Dr. Seidl in the St. Sebastian Hospital of Rio Janeiro. Five of them had reached the fourth day of the disease, and were in a highly critical state when the injections were commenced; four who had reached the stage of anuria and delirium died, and the fifth recovered after having received eighty c. cm. of the serum. Of the remaining patients one had reached the second day of the disease, and two the third day. They had all the symptoms of the earlier stages of virulent yellow fever, including albuminuria, but neither suppression of urine nor delirium, and they all recovered after vigorous serum treatment. It was noticed that after each injection there occured a fall in the temperature. At a later date two children having the characteristic black vomit," one at the second day of the disease and the other at the third, were treated with the serum by Dr. Sanarelli; the fever and the albuminuria quickly disappeared, the other general symptoms more gradually but convalescence was well established after the injection of 20 c. cm. and 65 c. cm. of the serum respectively. In another series of six cases occurring in an epidemic having a mortality of between 80 and 90 per cent. four recovered and two died. In fourteen other cases the serum was injected directly into a vein; eleven of these more or less rapidly recovered; of the three who died one had resisted the treatment, another had been delivered of twins a month previously and was very badly nourished, and the third was the subject of pronounced paludism. Thus 66 per cent., or two-thirds of all the cases treated, recovered. The serum obtained from an ox, which was found to be less active than that from the horse, was used as a prophylactic in a severe outbreak in an insanitary prison. Four persons had died in the course of a few days. All who were not immune by reason of previous attack were then injected, and no other case occurred, although the epidemic still raged in the adjacent town.

The Neutralisation of Toxins by the Digestive Secretion.

Nencki, Sieber, and E. S. Simanowski state that most toxins and antitoxines appear inert when introduced into the stomach or rectum, and they do not pass unaltered though the alimentary tracts, as neither urine nor fæces contain any part of them after the experiment. (British Medical Journal). Emulsions of stomach and of small and large intestines of rabbits and guinea-pigs, carefully filtered will, when mixed with the diphtherial toxin in varying proportions, generally neutralise the same. The emulsion of small intestine is the most efficacious. It owes its efficacy to the pancreatic juice. This secretion will neutralise the diphtherial toxin at the temperature of the room, but better still in the incubator; 1 g. of the secretion will neutralise 10,000 times the fatal dose of the toxin. The gastric juice is less active. This difference in activity does not depend on acidity or alkalinity. Watery pancreatic extracts are equally efficacious. As regards the tetanotoxin matters are reversed, the gastric secretion producing the strongest neutralising effect, similarly the bile if mixed with the toxin in the right proportion. Bile when mixed with pancreatic juice is more powerful than when employed by itself. The larger the various secretions remain mixed with the toxins prior to injection, the more powerful is their neutralising effect. The juices neutralize but do not render immune, for if juices and toxins be injected separately the action of the latter is not interfered with; in other words, the enzymes must have the opportunity of acting directly upon the toxins in order to neutralise them.

A French physician is reported as advancing the theory that whooping-cough is contagious only before the patient begins to whoop.

Auto-Intoxication, Ptomain Poisoning and Autotoxemia.†

The term "auto-intoxication" or "auto-infection" is best restricted to those symptoms directly referable to the action of poisonous ptomains. Chemically, ptomains are basic substances formed as a result of *putrefactive* or fermentative processes, such as *tyrotoxicon* in cheese, milk, or ice cream; from fish, *muscarin*; from poisonous mussels, *mytilatoxin*. All micro-organisms capable of giving rise to disease from poisonous ptomains within the system may, and doubtless do produce the symptoms which are ascribed to the infectious diseases.

Ptomains may have their origin within or without the body. We are, yet, unacquainted with the effects of those ptomains formed in the normal body by the common colon bacillus and other bacteria which inhabit the normal intestine. This effect, whatever it may be, is "auto-intoxication."

If we should eat a piece of cheese or pork, or should we drink milk, any one of which has undergone putrefactive changes outside of the body, it could not be properly called auto-intoxication (self-poisoning), but is, in brief, *ptomain poisoning*. On the other hand, "autotoxemia" is best restricted to a diminished or an excessive amount of a normal secretion, or to poisoning by leucomains.

An excessive amount of a normal secretion will produce autotoxemia, as instanced in jaundice and salivation, and a diminished amount of a normal secretion causes autotoxemia, as is the case in myxedema. Most leucomains are wholly inert, while others are violent poisons. Of the poisonous leucomains may be mentioned paraxanthin, methylxanthin, hetroxanthin, xantho-creatinin, and gerontin. Poisonous leucomains are found in the normal secretion and excretions, such as saliva, bile, urine, perspiration, feces, and expired air.

Again, the symptoms of poisoning by ptomains and leucomains differ very widely; in the former, usually developing within the first twenty-four hours, and accompanied by nausea and vomiting, intense pains in the epigastrium, obstinate constipation, subnormal temperature, or only slightly elevated, cold perspiration, and frqeuently collapse and death.

Autotoxemia develops slowly with manifold symptoms referable to the muscles (as in lumbago); in the central nervous system, as evidenced by despondency, mental, hebetude, insomnia, possibly epilepsy, and also in the peripheral nervous system, as observed in hemicrania, neuralgia and possibly multiple neuritis.

†Abstract of Editorial in Medical News.

The subject of bacteriology has developed within a few years to a wonderful degree, but its invariable accompaniment, autotoxemia, is still an undeveloped field to be thoroughly explored by those who study internal medicine, and who first gain some insight into the first pathological process in disease.

The Soft Catheter in Plugging the Nose.

Dr. M. P. Smithwick, in a recent issue of the Boston Medical and Surgical Journal, says:

Employment of the soft rubber catheter in plugging the nose requires no suggestion to those familiar with its use in nasal feeding. Except in nasal operations under a general anæsthetic, it is rarely necessary to plug the nose. Experts are usually correct in considering the frequency with which one resorts to this procedure in cases of spontaneous epistaxis to be inversely as his skill. A soft rubber catheter, a string more than twice the catheter's length (waxed dental floss is excellent) a wire (the stiletto of a gum-elastic catheter will do if the soft catheter is shortened), material for a plug, some styptic and a lubricant are necessary. A solution of cocaine is helpful and may be necessary to shrink the parts. Forceps are convenient. An end of the wire is passed through the catheter. Bring the ends of string together behind the catheter. Lubricate catheter; pass along floor of nostril, and, when the tip appears below the soft palate, grasp with forceps and draw it out of the mouth. Draw out the half of string not contained in the catheter. An end of the catheter carrying an end of string now projects from a nostril and from the mouth. Attach the plug and draw it near to the catheter's tip, leaving outside the plug sufficient string to project from the mouth when the plug is in position. Then withdraw from the nose the catheter and, until the plug is fixed firmly in position, the string simultaneously. Considerable swelling, at least of the soft palate, will follow. If the plug is aseptic there need be no apprehension.

READING NOTICES.

Marion-Sims College of Medicine.

The Marion-Sims College of Medicine has greatly increased its facilities for laboratory instruction. The course now comprises the following: Anatomy, Histology, Pathology, Pathological Anatomy, Pathological Chemistry, Clinical Microscopy, Physiology, Inorganic and Organic Chemistry.

During the past session the following

specimens from recent autopsies were demonstrated before the class:

Kidney. Chronic interstitial nephritis (12), senile atrophy with fatty degeneration, acute parenchymatous nephritis (3), miliary gummata, granular atrophy (4), passive hyperæmia (3), arterio-solerotic kidneys (3), passive hyperæmia with diffuse nephritis, passive hyperæmia with infarcts, secondary granular atrophy with cysts (2), degenerated syphilomata in kidneys, embryonic type and movable (3), fatty degeneration (2), diffuse nephritis (3), amyloid kidney, acute miliary tuberculosis, acute toxic nephritis with bile deposits, multiple sarcomata, horseshoe kidney, miliary abscesses in kidney, Ribbert's kidney (2), hydro-nephrosis after enlarged prostate.

Spleen. Chronic splenic tumor, acute splenic tumor (6), senile atrophy (3), pigmentation, chronic interstitial splenitis (2), chronic perisplenitis (3), acute miliary tuberculosis, chronic induration (2).

Liver. Laennec's cirrhosi (8), cloudy swelling, passive hyperemia (6), senile atrophy and fatty degeneration, abscess, nutmeg liver with multiple abscesses, biliary cirrhosis, sugar-cast liver (2), fatty nutmeg liver (3), liver in phosphorus poisoning, acute yellow atrophy, fatty degeneration, monolobular cirrhosis, malarial cirrhosis, general acute miliary tuberculosis (2), primary carcinoma, metastatic carcinoma, senile atrophy, cirrhosis with fatty degeneration (2), circumscribed cirrhosis, sugar-cast liver with miliary tuberculosis, hepatoptosis, cirrhosis with carcinoma, hypertrophic cirrhosis (3).

Heart and Vessels. Concentric hypertrophy of left ventricle, general arteriosclerosis (7), eccentric hypertrophy of the left ventricle (8), mitral insufficiency (4), chronic myocarditis (2), senile atrophy of the heart, fatty degeneration of the heart (3), hypoplasia of the heart (2), hypoplasia of the aorta (2), tricuspid insufficiency (5), mucoid degeneration of the epicardial adipose tissue (2), chronic endocarditis, hypertrophy of the right ventricle (3), dilatation of the right ventricle (2(, cor bipartitum, acute dilatation of the left ventricle, brown atrophy of the heart muscle, fragmentation of the heart muscle, aneurysm of the ascending aorta, total synechia of the pericardium (2), dilatation of the left ventricle, pericarditis sero-fibrinosa (2). multiple aneurysms of the descending aorta, chronic endocarditis.

Lungs. Chronic ulcerative tuberculosis (11), acute croupous pneumonia, œdema (3), total synechia of the pleura, atelectasis, miliary tuberculosis (4), cheesy bronchitis and peribronchitis, tubercular pneumonia (2), cirrhosis of the lungs, carnification (2), suppurative bronchitis, vicarious emphysema (3), purulent pleurisy, passive hyperæmia, pleuritis ossificans, pleurisy, pyothorax, senile atrophy, emphysema, senile emphysema, multiple sarcoma (2).

Other Organs. Pancreas annulare, suppurative leptomeningitis (2), chronic ulcers in the ileum, acute peritonitis, sporadic dysentery, tropical dysentery, typhoid ulcers in the ileum, degeneration in the foci of the spinal cord, cirrhosis of the pancreas, diabetes mellitus, chronic interstitial pancreatitis, perforation of typhoid ulcers in the ileum (2), ulcerated cancer of the stomach, perforative peritonitis, external and internal syphilitic pachymeningitis, gummata of the parietal bone (2), gastroptosis (3), salpingitis, fatty degeneration of the uterus, splanchnoptosis (2), Meckel's diverticulum (3), septic peritonitis, uremic enteritis, tubercular suppurative appendicitis, sero-fibrinous peritonitis (3), hemorrhagic gastritis (2), icterus (3), akathetic icterus (2), ascites (7), hydrops cystitis filleæ, metastatic cancer of the portal canal, metastatic cancer of the ductus communis choledochus, intestinal hemorrhage, omental umbilical hernia, chondrosarooma of the testicle, hypertrophy of the prostate, cystitis gangrenosa, struma fibrosa.

It ofttimes happens that the general character of a country can be determined at a glance, if that glance be comprehensive and clear. To a person of discernment who will journey through the Central West this fact is patent as is the other fact that this is one of the most highly favored regions on the earth.

In the bold-faced type of nature is this country labeled; and the label is easy to read. The only medium needed for the correcting of any mental myopia that prevents a man's seeing the merits of this region is a trip out there in person.

Tales of the Arabian Nights would seem to have been transferred to this section by the men who tell of it. Statements concerning this region and its development that have appeared in the daily press have been regarded as exagerations, by many till a visit removes all doubts. An inspection of this great section from the window of a Missouri Pacific train shows the reason for the great popularity that this section has among farmers in general.

As you travel you find on every side convencing evidence of the abundant prosperity; large and small farms alike showing the cultivation and care bestowed upon them by an enlightened and enterprising people; these farms, well-fenced, the houses, good

substantial structures, whose general air betokens success and progress; the sleek and well-fed cattle. horses of the finest breeds, whose well-kept, glossy coats reflect the smiling faces of men made happy by the prodigal returns of nature—and nature is lavish of her favors here in many ways more than one—all have the same story to tell.

What a man sows in this El Dorado, he reaps ten thousand fold; there is here no "wringing from reluctant soil" a scant subsistence; in the soil, above and below the soil is riches. The productiveness of this country is such that folk who have never seen do not believe. The history of this country is written in the language of hyperbole, but is fact. There needs no bolstering up of the truth with imagainations. for inventive mind falls back and asks a resting space of time to grasp the immensity of the West.

It takes no long and arduous voyage over a tricky sea to reach a land of wealth; no serious checks to labor in the way of climate drawbacks are found in the section reached by the Missouri Pacific Railway.

And to speak of some particular locality; just suppose you take the Missouri Pacific train to Omaha and steep your senses to forgetfulness in the intoxicating pleasures of the greatest exposition ever held in the West.

Three Cases of Diabetes Mellitus Treated with Benzosol.†

About the first of April, 1898, Dr. Martin Vaughn, of Plymounth, brought to my office a sample of urine for analysis. It was found to be acid in reaction, specific gravity 1.040 with a large proportion of sugar. Dr. Vaughn gave me the following history of the case:

J. H., male; 48 years; had been under the care of another physician for two years prior to this time. An examination of the urine was supposed to have been made, but upon inquiry it was found that the bottle, containing about 8 ounces, had been placed upon a shelf and allowed to stand for 24 hours; at the expiration of this time no Havemeyer sugar refinery being noticed as a precipitate, the attending physician concluded that the urine was normal, and informed the patient that he was suffering from nothing more than a slight attack of diabetes insipidus, and that he would have him well in a very short time. As was to be expected, the patient, instead of improving, grew steadily worse, and eventually passed into the hands of Dr. Vaughn, who brought the case to my notice as stated. Upon personal examination I found him suffering from all of the classical symptoms of diabetes mellitus, viz.: polyuria with very frequent urination; great thirst, many quarts of water being consumed daily; progressive emaciation and loss of strength; decided dryness of skin with a generalized pruritus,etc., etc. At my suggestion the patient was placed upon a treatment of opium, ergotin, belladonna, gentian, etc., with strict dietetic and hygienic restrictions. Upon this treatment the patient gained a little in strength, the specific gravity of the urine fell 1.032, with a corresponding decrease in the amount of sugar excreted. About Dec. 1 Dr. Vaughn moved from Plymouth to Winnemac, and the patient came to me for treatment. At this time my attention was called to the literature on Benzosol (Benzoate of Guaiacol) as a remedy for the control of sugar elaboration in diabetes, and as I was favorably impressed by the various clinical reports, I decided to give the drug a trial in this case. I prescribed Benzosol in 5 grain doses every four hours while awake; also a bitter tonic before each meal. Under this treatment the patient rapidly improved in general health and increased steadily in weight. The urine decreased in quantity, the specific gravity gradually receding to 1.020, and the sugar decreased progressively until it entirely disappeared. An examination of the urine at the present time shows a secretion normal in amount, sp. gr. 1.020 and not even a trace of sugar. The patient considers himself entirely well, in which opinion I am inclined to concur.

Case 2. Mr. E. B. Similar in all respects to case above related. except that the Benzosol treatment was commenced as soon as the patient came under my care. The results were equally prompt and satisfactory, and to-day the patient passes a normal amount of urine of a specific gravity of 1.020.

Case 3. Mrs. G.; widow; 50 years; has now been under my treatment for two months for the same disease. Benzosol, 5 grains, 4 times a day, is bringing about rapid improvement, and I hope and expect to soon discharge her in the same good condition as are Case 1 and 2.

It is of course needless for me, gentlemen, to advert to the necessity of directing your diabetic patients to avoid all carbo-hydrate food stuffs, and also to carry out to the letter your hygienic instructions. In addition to this I would certainly recommend a trial of Benzosol in every case of this disease, especially in view of the results obtained in the cases of the three patients mentioned, the particulars of which you know, and with all of whom you are personally acquainted.

†Dr. N. B. Aspinall in American Therapist.

Observations Upon the Treatment of Some Cases of Neurasthenia.†

That chalybeates, more especially the *organic* salts of iron, constitute an essential indication in the successful treatment in some cases of neurasthenia, especially in the female, where functional menstrual derangements exist, is to my mind *an indisputable fact.* They produce conditions, oftentimes not attainable by the inorganic preparations for many reasons, which experience and reflection clearly demonstrate.

In a recent clinical study of this affection, my conclusion, as above stated, is fully justified and corroborated by the microscopical blood examinations conducted by my esteemed and skillful friend, Dr. C. Fisch. That cerebro-spinal anæmia is a frequent important concomitant, if not an essential etiological factor of neurasthenia, I hardly think admits of cavil.

The clinical histories of appended cases were compiled by my son, Dr. Keating Bauduy, chief of the Neurological Clinic at St. John's Hospital, under whose direct supervision the investigations were conducted. That the ratio, or number of red blood corpuscles, and the percentage of hæmoglobin were deficient in the normal standard of these cases, prior to the treatment, *is incontestable*, as shown by the microscope. That several of the cases to be enumerated showed marked improvement, even after one or two weeks treatment, is moreover revealed in the same manner, and which for rapidity of effect is quite an exceptional, if not a startling therapeutic result, when compared with some of the prior and more established methods of treatment. That many of these cases presented unmistakable evidence of satisfactory improvement, from both a subjective and objective standpoint, was quite as notable as the permanent character of their general amelioration. That the ordinary tonics had in some instances been administered with nugatory results, while pursued along the old lines of authoritative medication, seems quite manifest.

My only explanation of the *surprising results* in the cases herein cited, where the usual officinal class of remedies had formerly been ineffectually essayed, was the superinduction, as is so frequently the case of disturbed digestion and assimilation; results but too familiar and disappointing to professional experience. Aside from the disturbances just mentioned, the development of headache, constipation, etc., frequently obviate their further administration.

When, a few years ago, my attention was called to Gude's preparation of "*Liquor Mangano-Ferri Peptonatus, Gude,*" (Pepto-Mangan) so extensively used and highly extolled in Germany, with my usual antipathy for new remedies, I reluctantly gave it a trial, anticipating that I would necessarily have to combat the usual disappointing effects of most of the other preparations of iron. The results, however, were *indeed a surprise to myself*, for the concomitant deranging sequelæ were so slight, that but in very few instances in *my extensive* utilization and experience with this special pharmaceutical preparation was I obliged to discontinue it. My experience having led me to believe that iron and manganese in combination are both indicated in the vast majority of cases of neurasthenia, this particular remedy, *I am now convinced, will prove a great boon both to the patient and the physician.* While it is maintained by some that in the hæmoglobin of the red blood corpuscle manganese is present, as well as iron, I have for many years procured results with a combination of both, not directly obtainable with one alone. We know, however, that manganese gives off oxygen to a greater degree than iron, and it has been argued that for this reason its internal exhibition might correspondingly increase assimilation.

Dr. Fisch's appended microscopical report shows that the increase in the percentage of hæmoglobin, in many of this series of cases, is far in excess of the proportionate increase of the red blood corpuscles. *This fact I deem of greater importance as to the effectiveness of the medicine*, because the count of the blood corpuscles is to a certain extent relative, and the size varies greatly in different cases, and for other reasons the same amount of blood plasma contains different numbers of red cells; hence I would particularly lay stress upon the proportionate increase of the hæmoglobin as the more importaut factor. The *notable* and *astonishing improvement* of these cases, when placed upon this preparation, led me to their closer scrutiny, as well as microscopic observation. Before concluding, I *wish particularly* to call attention to the fact of the absence of digestive disturbances and necessary consequent interference in the assimilation. All

† Read before the St. Louis Medical Society, Saturday Evening, February 5th, 1898, by Jerome K. Bauduy, M. D., LL.D., St. Louis, Mo., Professor Nervous and Mental Diseases, and of Medical Jurisprudence, Missouri Medical College.

other unpleasant complicating results were notable by their absence. Of course we do not consider the remedy applicable to cases of lithemic neurasthenia, nor in any manner a *specific* in any variety of neurasthenia. In many cases the addition of arsenic and strichnia greatly increase the efficacy of the preparation. I must also take cognizance of the salient fact of the rapidity with which a large number of female neurasthenics, under our treatment, who have suffered with marked functional menstrual derangements, have attained a normal condition under the administration *of this most elegant combination of iron and manganese.*

As it would be tedious and monotonous to present an exhaustive citation of a multiplicity of clinical cases, I have confined myself to a recital of a few typical ones:

Clinical Report, by Keating Bauduy, M. D.

Case 1.—Mrs. S., aged 32 years, mother of three children, came to me in a pitiable mental condition, and had in her arms a nursing hydrocephalic child, five months old. Her mental depression approached a type of veritable melancholia. My first idea was to advise that the child be weaned, and then place her upon the claasical opium treatment for melancholia. This was her third child, and like all mothers, she clung to the life of her unfortunate with characteristic tenderness. Therefore she bluntly insisted upon my candid opinion, as to whether the weaning of the baby might prove fatal. Knowing, as I did, that the life of the child was simply a question of a period of short duration in either case, I so informed her; nevertheless, I insisted that the best hope for her recovery was to wean it. This she refused to do, and after Dr. Fisch had made a blood examination and pronounced her highly anæmic, I reluctantly undertook the case. Aside from her mental depression, physical lassitude, and marked pallor, the "casque neurasthenique" symptom was a dominant feature in her case. Any effort to perform her usual household duties produced sensations of cerebral fullness, and persistent pain in the vertex. She even confessed that the idea of suicide had of late frequently haunted her. Under the administration of "Pepto-Mangan," with no other treatment, after the short period of fifty-two days, she was discharged fully restored to her normal condition. Microscopic report showed a relative gain in number of red blood corpuscles of 34 per cent.; hemoglobin 44-5 per cent.

CASE I.

I.	Examination. (Beginning of Treatment.) Date, November 17, 1897.	
	Red Corpuscles	3120000
	Hemoglobin, per cent.	52
II	" Date, December 2, 1897.	
	Red Corpuscles	3400000
	Hemoglobin, per cent.	54
III	" Date, December 26, 1897.	
	Red Corpuscles	4130000
	Hemoglobin, per cent.	67
IV	" Date, January 2, 1898.	
	Red Corpuscles	4245000
	Hemoglobin, per cent.	75
Duration of Treatment		52 days
Gain (Absolute)	Red Corpuscles (in 1000's)	1125
	Hemoglobin, per cent.	23
Gain (Relative)	Red Corpuscles, per cent.	34
	Hemoglobin, per cent.	44.5

Case 2.—Mrs. Sim, aged 23 years, mother of two children, youngest six months and nursing. About the fourth month of her last pregnancy she was troubled with dyspnœa. Gave history of instrumental delivery, followed by puerperal eclampsia. Great loss of blood during birth of child. Two months later, abscesses developed in each breast, and patient was confined to bed during a period of ten weeks. Case presented typical manifestations of neurasthenia, also characteristic apprehensions, with preternatural emotional mobility. Constant cephalalgia in vertical region, persistent parasthesiæ in extremities, mouth and tongue, were also present. She was intensely pale with every appearance of profound

CASE II.

I	Examination. (Beginning of Treatment.) Date, November 20, 1897.	
	Red Corpuscles	3470000
	Hemoglobin, per cent.	60
II	" Date, December 22, 1897.	
	Red Corpuscles	3980000
	Hemoglobin, per cent.	69
III	" Date, January 8, 1898.	
	Red Corpuscles	4120000
	Hemoglobin, per cent.	76
Duration of Treatment		49 days
Gain (Absolute)	Red Corpuscles (in 1000's)	650
	Hemoglobin, per cent.	16
Gain (Relative)	Red Corpuscles, per cent.	19
	Hemoglobin, per cent.	27

anæmia. Aside from a mild laxative which was given to obviate constipation—an obstinate feature in her case—nothing was administered save "Pepto-Mangan." After a period of treatment of forty-nine days I discharged her, as she evinced none of the symptoms which formerly existed. A notable feature was the corresponding improvement of the child, notwithstanding the fact that I had previously insisted upon its being weaned, which she had, nevertheless contrary to my instructions, continued to nurse. Microscopic report showed a relative gain: red blood corpuscles 19 per cent.; hemoglobin 27 per cent.

Case 3.—D. G., aged 25 years, unmarried. Suffered from nervous headache for past year. Vaso-motor disturbances evidenced by alternate flushings and pallors, heat and cold. Atonic dyspepsia. Irregularity of bowels. Disturbed sleep. Depressed physical condition, correspondingly weak pulse. After taking "Pepto-Mangan" fifty-seven days, reported feeling generally improved. Digestion was better, pulse stronger and headaches greatly diminished in intensity. Vaso-motor disturbances disappeared. Microscopic examination showed a relative gain: red blood corpuscles 11 per cent.; hemoglobin 15 per cent.

Case 4.—Miss S., aged 28 years, presenting many of the well-defined symptoms of neurasthenia, was in a condition of profound mental and physical weakness. The history showed that since our great cyclone of May 27, 1896, she had never been her normal self, and was unable to perform any sustained mental or physical strain. Dating from that episode she had always worried, and was constantly the victim of peculiar forebodings. Insomnia and general malaise were cardinal symptoms. My diagnosis was what has been termed "cyclone neurosis, of which I have seen numerous cases. Menorrhagia existed to an alarming extent for which I accordingly recommended rest and the recumbent posture during her periods. Because of the pronounced insomnia, I prescribed a nightly dose of hyoscyamine and sulfonal during the first week of treatment as a hypnotic, which constituted the only medication other than "Pepto-Mangan." After having taken the latter for forty-one days, I discharged her from treatment, as she had passed her last menstrual period after a normal flow of three days, her pallor having given way to rosy cheeks and her physical and mental condition being entirely satisfactory. Microscopic report showed a relative gain: red blood corpuscles 38 per cent.; hemoglobin 47 per cent.

Case 5.—Mr. C., aged 21 years, unmarried. Highly anæmic, very pale. Anorexia and insomnia persistent. Physical condition greatly depressed. Cardinal feature was a sexual hypochondriacal tendency. Gave history of excesses both alcoholic and sexual. Aside from advice as to the necessity of leading a moral life, and abstaining from all stimulants, gave no medicine

CASE III.

I.	Examination. (Beginning of Treatment.) Date, November 26, 1897.	
	Red Corpuscles	3720000
	Hemoglobin, per cent.	61
II.	" Date, January 22, 1898.	
	Red Corpuscles	4135009
	Hemoglobin, per cent.	70
Duration of Treatment		57 days
Gain (Absolute)	Red Corpuscles (in 1000's)	415
	Hemoglobin, per cent.	9
Gain (Relative)	Red Corpuscles, per cent.	11
	Hemoglobin, per cent.	15

CASE IV.

I.	Examination. (Beginning of Treatment.) Date, November 26, 1897.	
	Red Corpuscles	2807000
	Hemoglobin, per cent.	46
II.	" Date, December 17, 1897.	
	Red Corpuscles	3200000
	Hemoglobin, per cent.	50
III.	" Date, January 4, 1898.	
	Red Corpuscles	3250000
	Hemoglobin, per cent.	56
IV.	" Date, January 8, 1898	
	Red Corpuscles	3875000
	Hemoglobin, per cent.	68
Duration of Treatment		41 days
Gain (Absolute)	Red Corpuscles in 1000's)	1068
	Hemoglobin, per cent.	22
Gain (Relative)	Red Corpuscles, per cent.	38
	Hemoglobin, per cent	47

CASE V.

I.	Examinamion. (Beginning of Treatment.) Date, November 26, 1897.	
	Red Corpuscles	3670000
	Hemoglobin, per cent.	44
II.	" Date. December 14, 1897.	
	Red Corpuscles	3700000
	Hemoglobin, per cent.	42
III.	" Date, January 8, 1898.	
	Red Corpuscles	3990000
	Hemoglobin, per cent.	54
IV.	" Date, January 22, 1898.	
	Red Corpuscles	4010000
	Hemoglobin, per cent.	56
Duration of Treatment		57 days
Gain (Absolute)	Red Corpuscles (in 1000's).	340
	Hemoglobin, per cent.	12
Gain (Relative)	Red Corpuscles, per cent.	9
	Hemoglobin, per cent.	37

CASE VI.

I. EXAMINATION.
(Beginning of Treatment.)
Date, November 26, 1897.
Red Corpuscles 3450000
Hemoglobin, per cent. 60
II. " Date, December 22, 1897.
Red Corpuscles 3720000
Hemoglobin, per cent. 62
III. " Date, January 8, 1898.
Red Corpuscles 3916000
Hemoglobin, per cent. 62
IV. " Date, Jannary 16, 1898.
Red Corpuscles 3890000
Hemoglobin, per cent. 65

DURATION OF TREATMENT.....51 days
GAIN (Absolute) { Red Corpuscles (in 1000's). 440 / Hemoglobin, per cent.... 5
GAIN (Relative) { Red Corpuscles, per cent. 13 / Hemoglobin, per cent.... 8

CASE VII.

I. EXAMINATION.
(Beginning of Treatment.)
Date, November 30, 1897.
Red Corpuscles 3210000
Hemoglobin, per cent. 60
II. " Date, December 14, 1897.
Red Corpuscles 3670000
Hemoglobin, per cent. 68

DURATION OF TREATMENT.....14 days
GAIN (Absolute) { Red Corpuscles (in 1000's). 460 / Hemoglobin, per cent.... 8
GAIN (Relative) { Red Corpuscles, per cent. 14 / Hemoglobin, per cent.... 13

CASE VIII.

I. EXAMINATION.
(Beginning of Treatment.)
Date, November 30, 1897.
Rep Corpuscles 2970000
Hemoglobin, per cent. 42
II. " Date, January 8. 1898.
Red Corpuscles 3100000
Hemoglobin, per cent. 49
III. " Date, January 16, 1898.
Red Corpuscles 3250000
Hemoglobin, per cent. 51

DURATION OF TREATMENT.....47 days
GAIN (Absolute) { Red Corpuscles (in 1000's). 280 / Hemoglobin, per cent.... 9
GAIN (Relative) { Red Corpuscles, per cent. 9 / Hemoglobin, per cent.... 22

CASE IX.

I. EXAMINATION.
(Beginning of Treatment.)
Date, January 2, 1898.
Red Corpuscles 3720000
Hemoglobin, per cent. 54
II. " Date, January 22, 1898.
Red Corpuscles 4105000
Homoglobin, per cent. 60
III. " Date, January 29, 1898.
Red Corpuscles 4130000
Hemoglobin, per cent. 64

DURATION OF TREATMENT.....27 days
GAIN (Absolute) { Red Corpuscles (in 1000's). 410 / Hemoglobin, per cent.... 10
GAIN (Relative) { Red Corpuscles, per cent. 11 / Hemoglobin, per cent.... 12

but "Pepto-Mangan," with the addition of arsenic and strychnia. After fifty-seven days of treatment, patient was much benefited. Microscopic report showed a relative gain: red blood corpuscles 9 per cent.; hemoglobin 27 per cent.

CASE 6.—Mrs. D., aged 36 years, married; five children. Since birth of last child, eighteen months ago, has been in state of profound nervous prostration. Previously resisted ordinary tonic and constructive treatment. Menorrhagia was the dominant feature of the case. After taking "Pepto-Mangan" for fifty-one days patient evinced more improvement than during any stated time throughout the past eighteen months. Last menstruation approached the normal flow. Microscopic report showed a relative gain: red blood corpuscles 13 per cent.; hemoglobin 8 per cent.

CASE 7.—Mrs. J., aged 48 years, widow; mother of a large family. Cardinal feature of case was recurrent cephalalgia at intervals of several days. This case reported an improvement as to the intensity and duration of headaches, after the period of fourteen days of treatment. Only two blood examinations were made. A further opportunity to observe this patient did not present itself, in consequence of her failure to continue the treatment. Microscopic examination showed a relative gain: red blood corpuscles 14 per cent.; hemoglobin 13 per cent.

CASE 8.—H. F., aged 18 years, school teacher, unmarried. Symptomatology of neurasthenia. Malaria was a complicating feature. Amenorrhœa for past six months was the principal symptom for which she consulted me. Aside from a course of quinine to eradicate the malarial feature, I exclusively gave "Pepto-Mangan." After forty-seven days treatment she was apparently much improved, her menses having appeared in the interim. Microscopic examination showed a relative gain: red blood corpuscles 9 per cent.; hemoglobin 22 per cent.

CASE 9.—Mrs. L., aged 42 years, married, three children. Comes from neuropathic family, one uncle an epileptic. Has always been quite delicate anæmic. Since sudden death of husband has manifested great irritability of temper. Loses control of herself upon the slightest provocation. Cries easily, but not melancholic. Peculiarly apprehensive of sudden death; imagines upon retiring, that she will never awake; paroxysmal attacks of anxiety, and fatigued upon the slightest exertion. Anorexia. Habitual constipation. Sleeps restlessly. Patient although still very pale, after taking "Pepto-Mangan" for twenty-seven days, began to manifest a general improvement. Microscopic report showed a relative gain: red blood corpuscles 11 per cent.; hemoglobin 12 per cent.

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INCORPORATED 1867.

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CASE X.

I. EXAMINATION.
(Beginning of Treatment.)
Date, January 4, 1898.
Red Corpuscles 3124000
Hemoglobin, per cent. 56
II. " Date, January 14, 1898.
Red Corpuscles 3200000
Hemoglobin, per cent. 57
III. " Date, January 22, 1898.
Red Corpuscles 3250000
Hemoglobin, per cent. 62
IV. " Date, January 29, 1898.
Red Corpuscles 3460000
Hemoglobin, per cent. 68

DURATION OF TREATMENT.....25 days
GAIN (Absolute) { Red Corpuscles (in 1000's). 336 / Hemoglobin, per cent.... 12
GAIN (Relative) { Red Corpuscles, per cent. 12 / Hemoglobin, per cent.... 12

CASE XI.

I. EXAMINATION.
(Beginning of Treatment.)
Date, January 5, 1898.
Red Corpuscles 3856000
Hemoglobin, per cent. 63
II. " Date, January 14, 1898.
Red Corpuscles 4001000
Hemoglobin, per cent.... 65
III. " Date, January 22, 1898.
Red Corpuscles 4051000
Hemoglobin, per cent.... 71
IV. " Date, January 29, 1898.
Red Corpuscles ..... .4120000
Hemoglobin, per cent. 75

DURATION OF TREATMENT.....24 days
GAIN (Absolute) { Red Corpuscles (in 1000's). 264 / Hemoglobin, per cent.... 12
GAIN (Relative) { Red Corpuscles, per cent. 11 / Hemoglobin, per cent.... 12

CASE XII.

I. EXAMINATION.
(Beginning of Treatment.)
Date, January 16, 1898.
Red Corpuscles 2985000
Hemoglobin, per cent. 49
II. " Date, January 23, 1898.
Red Corpuscles 3120000
Hemoglobin, per cent. 53

DURATION OF TREATMENT..... 7 days
GAIN (Absolute) { Red Corpuscles (in 1000's). 135 / Hemoglobin, per cent.... 4
GAIN (Relative) { Red Corpuscles, per cent. 5 / Hemoglobin, per cent.... 8

CASE 10.—Mrs. P., aged 36 years, married, no children. Family history predisposed to tuberculosis. Physically in good health. Since cyclone, May 27, 1896, when her house was totally destroyed, and she narrowly escaped death, she developed nervous headaches; later on she manifested a listless and apathetic condition. Sleeps excellently, but does not feel refreshed upon awakening. Complains of drowsiness. Marked irritability of temper. Appetite fair, but nervous dyspepsia. Boards with sister as she can not muster courage to manage a household of her own. After taking "Pepto-Mangan" for twenty-five days she began to feel much brighter and better, but still occasionally lapses into her former indifferent mood. Color better, and nervous dyspepsia greatly relieved. Microscopic report showed a relative gain: red blood corpuscles 12 per cent.; hemoglobin 12 per cent.

CASE 11.—Mr. M., aged 29 years. Family history tuberculous. His avocation was that of a "book-maker" during the past few years. The strain of gambling and the consequent excitement and worry have made him a nervous wreck. Jerky and fidgety at all times. Inability to concentrate his mind any time. Suffers from nightmare and phantasmagoria during sleep, which is consequently much disturbed. Is troubled with constipation and greatly impaired digestion. Anorexia marked. Much reduced in weight. Although always fatigued and depressed, he constantly walks to relieve his pent-up nervous irritability. Dreads to be alone for fear something may happen to him. After the administration of "Pepto-Mangan" for twenty-four days, patient reports a general improvement, especially as to his appetite and the relief of his indigestion. Microscopic report showed a relative gain: red blood corpuscles 11 per cent.; hemoglobin 12 per cent.

CASE 12.—A. McG., aged 20 years, servant, unmarried. History showed the ordinary "symptom-group" of neurasthenia. After the short period of seven days, having taken but one bottle of "Pepto-Mangan," her condition was greatly alleviated. Microscopic report showed a relative gain: red blood corpuscles 5 per cent.; hemoglobin 8 per cent.

For Hay Fever.

Quinine Hydrobromate,..... gr. 120
Antipyrine,..... gr. 15
Gum Camphor..... gr. 1
Cocaine Hydrochlorate,..... gr. 15
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Benzoin Nebulizing Fluid, q. s. ozs. 4
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Gives immediate relief even in the most aggravated cases of *hay fever*. Its thorough and persistent use obviates the necessity of a change of climate, and in time produces a permanent cure.

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Food and Teeth.

George W. Williams, D. D. S., of Richmond, Indiana, one of the leading dentists of that State and a popular writer on dental subjects, in a recent article says:—"Many of the prepared foods sold for children are destitute of the qualities necessary to form sound and painless bones and teeth, and there is a great difference in growing up with fine grained, well glazed teeth in comparison with the brittle, chalky teeth we commonly see. Diet is of the first importance in promoting the upbuilding of the bony system, and incidentally we would state that as a food for this purpose there is nothing that will equal 'Imperial Granum.' It is a pure, unsweetened food, made from the most nutritious portions of the finest growths of wheat. No derogatory word has ever been uttered by the medical or dental professions against Imperial Granum and its bone-building qualities. Perhaps the most important period in childhood is when the first set of teeth are erupting. It has been calculated that one child in ten has its life destroyed in consequence of diseases which have their origin at this time. Thus it is evident that children should be watchfully cared for, and I believe that besides those who die from diseases readily traced to irritation during the eruption of the first teeth, a number are the victims of diseases superinduced by general neglect of the mouth and the consequent tooth decay and improper mastication of food.

The Practical Treatment of Scalds and Burns.

N. David Chaplain, B. S., M. D., of Syracuse, N. Y., after detailing four cases of more or less severe burns in which he derived great help from the use of Unguentine, which was alternated and compared with the usual oily applications, reached the following conclusions regarding this valuable preparation: A—Easy to apply. B—Great relier to patient, it acting as a sedative, cooling and non-irritating. C—It does not dry out so quickly, and consequently the dressings do not have to be changed so often. D—Rapid cicatrizant. E—When used prevents granulation tissues. F—It is non-toxic. G—Patients recover more quickly under the Unguentine treatment than any other. H—Prevents the necessity of skin grafting in a good many cases by hastening the reparative processes. I—It is much more convenient, neat and practicable.—*Abstract from article in New York Medical Journal.*

Wet Dressings in Surgery.*

This may well be called the Dressing Period in the evolution of surgery. Time was when the scalpel alone was emblazoned on the escutcheon of the surgeon and with the skillful incision his responsibility ended, nor did the dignity of his office admit of his performing what were then held as the minor and menial offices of after treatment which then was supposed to cover everything that followed upon the first brilliant sweep of the surgeon's glittering steel. There are no doubt some who hear me today who remember the dramatic toss of the knife behind him of the elder Gross when completing his incision and the autocratic delivery of the case to his assistants for the dressing and treatment of the wound.

Even to this day the red, white and blue stripes of the barber-pole tell of surgery's humble origin and the bandagers and bone setters still roam through the villages of England and the barber surgeons still apply the leech and cup for the more dignified practitioner. It remained for Sir Joseph Lister to break the spell of this *otium cum dignitate* which was the bane of all surgical progress and teach the autocrats of the scalpel that surgery meant much more to the organism than the mere solution of continuity along anatomical lines—that this indeed was the *avant courier* of the real principle from which all the almost miraculous achievements of modern surgery had been evolved. It was my privilege to be present at the presentation to the British Association, at Edinburgh, in 1875, by Professor Lister for the first time, of a clinical demonstration of his mode of surgical dressing which opened to surgery new worlds to conquer. The case was one of ligation of the external iliac and the elaborate dressings being removed proved the triumph of his principle, though his venerable colleague, Prof. Spence, almost on the verge of eternity, threw a well poised Parthian lance at the rising genius of modern surgery. Since that day every operation, however simple in itself, has been one in which the surgeon earned his bread by the sweat of his brow. No turning over the case to the unwashed student, for he whose records of success are proclaimed today is the operator who leaves not his patient until the last jot and tittle of aseptic dressing has been fulfilled, for so exacting is this principle that *falsus in uno falsus in omno* is the inflexible law of its operation.

As a matter of course, with the increase of such labor, necessary as it has proved to be to insure surgical success, the ingenuity of man was set to work at once to simplify the methods without impairing the efficiency of aseptic surgery. So active has been the work in this field that apparatus of every device and design has been offered to the profession until its name is legion, and of making of dressings, as the patriarch has said of books, "there is no end." As in everything else the element of "faddism" or surgical "fashion" has been dominant even in this unesthetic field, and the very men who pretend above all others to condemn the follies of feminine fashion are themselves afraid to say their soul is their own when it comes to the operating and dressing of wounds before their lynx-eyed professional rivals. For years past, for example, it had been almost as much as a surgeon's name was worth to apply oleaginous preparations to surface lesions although the very first treatment of wounds of which we read recommends the "pouring of oil," and in the case of the good Samaritan received the endorsement of the Great Physician himself.

There are some things, however, that fashion cannot forbid, and this is one of them—like Banquo's ghost "it will not down." Long before science had thrown its searchlights over the dark field of biogenesis, experience had taught the steel clad warrior the virtues of Gilead's balm, and from the shades of Olivet where fell the tears of Him who came for the healing of the nations, man had learned to gather the oil for his wounded body. Since the discovery of the bacteriologic proeesses of infection in open wounds, there has been a gradually growing tendency to return to the ancient remedial agents which experience dogmatically taught were rationally indicated. In the last edition of that eminently practical work upon surgery by Wyeth, of New York, we find this positive and significant utterance upon the use of oil and balsam, the first surgical dressings known to humanity: "I know of nothing equal to this valuable preparation. The oil acts in a twofold way—the surface of the wound is moistened by it, while the liquid excretion from the wounded surface is carried off in the dressing by capillary attraction. The removal of moisture cripples the proliferation of the bacteria and in this way aids in antisepsis."

*Presented in Section on Surgery and Anatomy, at the Forty-ninth Annual Meeting of the American Medical Association, held at Denver, Colorado, June 7–10, 1898. By Thomas Osmond Summers, M. A., M. D., F. S. Sc., London. Professor of Anatomy and Orthopedic Surgery in the St. Louis College of Physicians and Surgeons, St. Louis, Mo.

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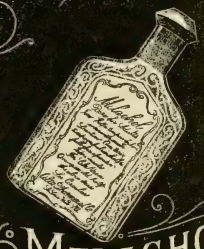

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PHASELIN

FORMULAE

RHEUMAGON, A COMBINATION OF THE IODIDES AND PHOSPHATES OF SODIUM.
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In the process of repair, all the structural elements must be supplied from beneath the surface of the lesions so that the constructive metabolism would not be injured by the mechanical interference of the oil globules which as intimated in the quotation just made "would cripple the proliferation of bccteria" which come from without. There are many wet dressings which if frequently renewed show excellent results, but there are few cases which come before us in which disturbance of dressing does not do mechanical injury to the process of repair, besides exposing the wound to the entrance of pyogenic and other cocci while the dresssing is being changed, while the retention of material which has expended its aseptic influence is a constant menace to the integrity of the organism at large. Lister was working to the overcoming of these difficulties when he devised his "paste" dresssing which, however, failed to meet the desired ends in many cases. The use of animal and vegetable oils is also open to the objection offered to solutions in dressings—the necessity of changing the dressing too often—but for a different reason, the tendency of the oils to become rancid and this applies also to the keeping of such dressings prepared for use. Wyeth recommends in his oil and balsam dressing the sterilization of the oil before using, but admits that this is often impracticable and recommends in this case the use of the plain cold castor oil of the shops.

It is therefore clear that to carry out the idea of a practical dressing it must be :

1. Antiseptic. This applies not only to the effect of the application to the part affected, but to the corporate substance itself, thus insuring it against auto-infection before applying.

2. Permanent. This is necessary in order to avoid too frequent removals as well as to preserve itself from deterioration.

3. Non-irritating. There is nothing more delicate, more easily disturbed than the formative principles of tissue so that care must be taken in the dressing of all lesions of surface lest the agents used should arrest the tender process of repair, as well as protect it from the invasion of destructive germs.

4. Constructive. While the majority of lesions. especially those of traumatic origin, if not interfered with by destructive germs, will heal rapidly of themselves, there are very many which require, not only this negative condition, but also a positive stimulation of function in the constructive elements of the part. Stimulation of cell growth, however, must not go to the extent of irritation, in which case there will be destruction instead of construction of tissue. The fulfillment of these conditions has been the aim of the surgical pharmacist from the time when the first coccus wriggled across the field of the microscope and gave its first exhibition to the scientific investigator of its dance of death within the organism of man. But amid all this elaboration of apparatus it was to Sir Astley Cooper after all that the credit is due, for his foreseeing therapy leaping over as it were the dark chasm which separated the triumphs of his surgical genius from the science illumined land of modern surgical pathology. It was he who without the knowledge of the bacteriologic factor in the great problem of surgical treatment, by the intuition of genius gave to us the essential principles of external dressing for surface lesions. His formula, however, was open to the objection of violating one of the conditions herein laid down—that of permanence—in that lard was used instead of petrolatum which has since been discovered, and is now substituted in the preparation known as Unguentine, which is an ideal formula constructed along the lines of that suggested by Sir Astley Cooper, but altered to the conditions of modern aseptic surgery. The irritating effects of the ordinary alum has also in some way been obviated, furnishing thus a typical dressing for surface lesions. For internal lesions that are to be immediately and permanently closed beneath the sutured integument there are many valuable aseptic liquid preparations which we prefer to the too indiscriminate use of iodoform, aristol *et id omne genus*, but we are free to admit that for all external dressings we have found the highest fulfillment of modern aseptic or antiseptic surgery in the preparation just mentioned.

I am not sure whether this is a proprietary preparation or not, but this I do know, its formula is an ideal one and its results are certainly very satisfactory. It is about time we were looking aronnd after labor-saving methods when we have to employ, at the simplest incisive operations an extra attendant to wipe the sweat from our brows as the houri fans the Sultan's heated cheek —though our attendants are not all houris, nor are our cheeks fired with the congestion of a lazy passion. We are glad to see this unholy war against oleaginous applications coming to an end, just as we should be also glad to see the phlebotomy pendulum point to the nadir. In surgical politics I am a middle of the road man—*In medio tutissimus ibis.*

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LISTERINE is a non-toxic, non-irritating and non-escharotic antiseptic, composed of ozoniferous essences, vegetable antiseptics and benzo-boracic acid.
LISTERINE is sufficiently powerful to make and maintain surgical cleanliness in the antiseptic and prophylactic treatment and care of all parts of the human body.
LISTERINE has ever proven a trustworthy antiseptic dressing for operative or accidental wounds.
LISTERINE is invaluable in obstetrics and gynecology as a general cleansing, prophylactic, or antiseptic agent, and is an effective remedy in the treatment of catarrhal conditions of every locality.
LISTERINE is useful in the treatment of the infectious maladies which are attended by inflammation of accessible surfaces—as diphtheria, scarlet fever and pertussis.
LISTERINE is especially applicable to the treatment of scarlet fever, used freely as a mouth wash, or by means of the spray apparatus.
LISTERINE is extensively prescribed in typhoid fever both for its antiseptic effect and to improve the condition of the stomach for the reception of nourishment.
LISTERINE agreeably diluted, is prescribed with very good results, in the treatment of diphtheria, both as a prophylactic and curative—internal antiseptic—agent.
LISTERINE is used extensively with good results in the treatment of whooping cough.
LISTERINE diluted with water or glycerine speedily relieves certain fermentative forms of indigestion.
LISTERINE is indispensable for the preservation of the teeth, and for maintaining the mucous membrane of the mouth in a healthy condition.
LISTERINE employed in a sick room by means of a spray, or saturated cloths hung about, is actively ozonifying and imparts an agreeable refreshing odor to the atmosphere.
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2. Given in large doses, in two capsules, each containing fifteen grains, at intervals of two hours, it may be detected in the milk in from five to eight hours after each ingestion, and from nineteen to twenty-three hours afterward it cannot be discovered, so elimination lasts eighteen hours at the maximum.

3. The Antipyrine during this time passes into the milk only in an excessively weak proportion, very much less than fifty parts in a thousand; it is only in exceptional condition—for instance, when sixty grains are administered in sixty hours—that it perceptibly reaches this proportion.

4. It does not influence in any way the quality of the milk, and, particularly, the lactose, the casein or the fat.

5. It seems to have no action at all on the secretion, which always remains very abundant, provided the woman continues to nurse.

6. From the absence of general symptoms and from examinations of the weight, the infinitesimal quantity absorbed by the nursling does not seen to have any unfavorable action.—*New York Medical Journal.*

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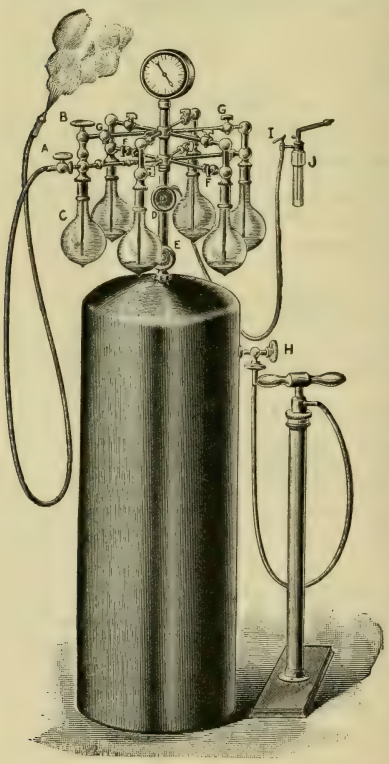

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Should Physicians Pray?

This non-medical question has recently been discussed with considerable vigor in the columns of a Western medical journal, the editor of which, we are glad to note, takes his stand on the side of prayer. (Modern Medicine, July, 1898). Our purpose in referring to the matter is not to enter the controversy, but only to suggest that the opposition to prayer on the part of those who look upon it as a mark of superstition must be largely based upon a misapprehension as to what real prayer is. By many, prayer is doubtless looked upon as an effort to persuade the Almighty to do something which he otherwise might be not willing to do, or might neglect to do Viewed in such a light, prayer may be justly considered as belittling God, and indicating a state of development only a small advance beyond heathenism and idol worship. True prayer is simply a surrender of the will to God, to the almighty force which rules the universe, to that (to quote the words of Herbert Spencer) "unknowable intelligence" which sustains and rules every atom in the universe.

Prayer is simply putting one's self into harmony with the divine order. Prayer changes the one who prays,not the almighty, infinite, unchanging Power to whom the prayer is addressed. The benefit derived from prayer is the state of mind into which the true spirit of prayer inducts the petitioner. A prayer which consists simply of the repetition of a form of words, or a preachment at the Almighty, is a hypocritical pretense. Such prayers may well be condemed, and have no place in the assemblies of intelligent men.

God dwells within men, as in all nature, and is ever seeking to lead him aright. Prayer consists not in a repetition of words, but in the desire of the heart to be right, to act in harmony with that all-healing and all-sustaining Power which is ever at work in man, and about him, to bring him, together with all other created things, to the highest level of perfection, and to work out for him the greatest possible measure of happiness and well-being.

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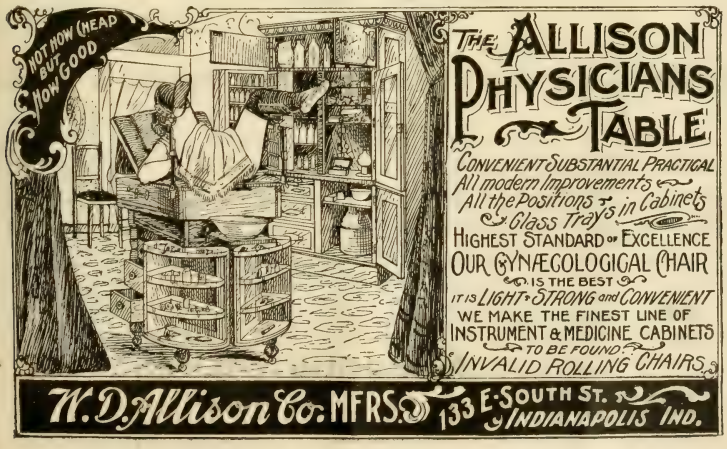
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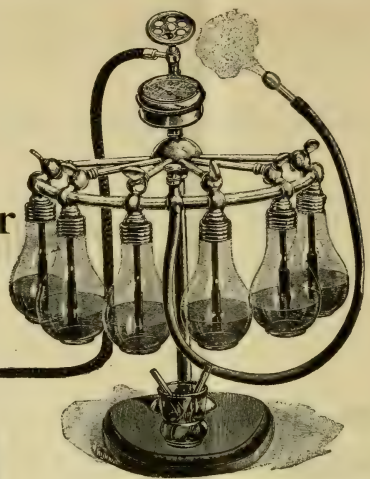

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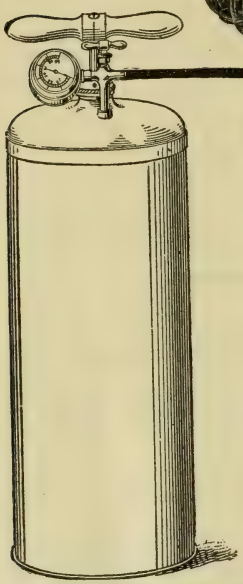

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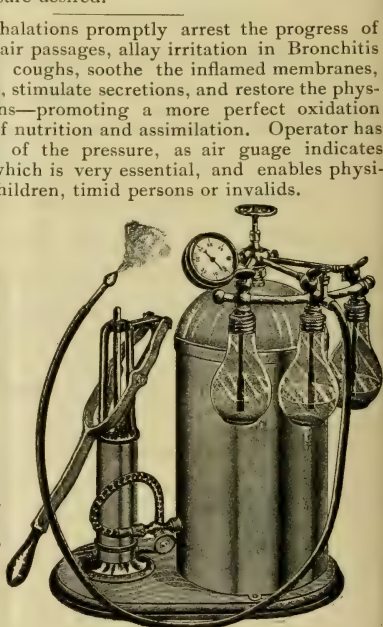

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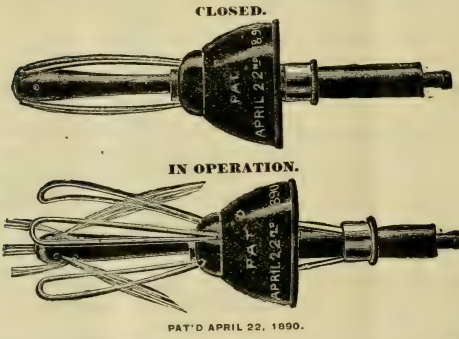

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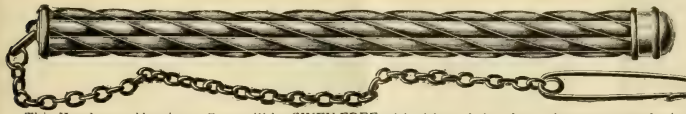

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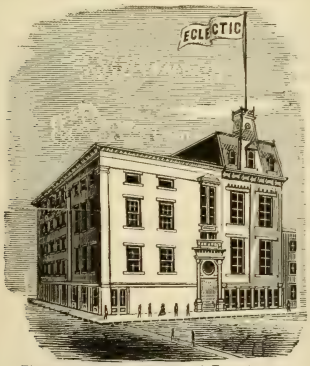

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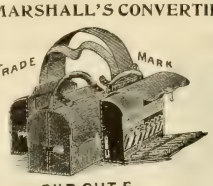

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SOUTHBOUND.

		No. 403.	No. 41.
Lv. Charlotte,	S. A. L.	*7 50am	*10 25pm
Ar. Clinton.	"	*9 45am	*12 14am
Ar. Abbeville,	"	11 03am	1 35am
Ar. Athens,	"	1 13pm	3 43am
Ar. Atlanta,	(Central time)	2 50pm	5 20am

NORTHBOUND.

		No. 492.	No. 38.
Lv. Charlotte,	S. A. L.	10 25am	*7 50am
Lv. Monroe,	"	*9 40pm	*6 05am
Lv. Hamlet,	"	*11 15pm	8 00am
Ar. Wilmington,	"	.....	*12 05pm
Lv. Raleigh,	"	*2 16am	*11 25am
Ar. Henderson,	"	3 28am	*12 57pm
Ar. Weldon,	"	*4 55am	*2 45pm
Ar. Richmond,	A. C. L.	8 20am	7 34pm
Ar. Washington.	Penn. R. R.	12 31pm	1 30pm
Ar. Baltimore,	"	1 46pm	10 08am
Ar. Philadelphia,	"	3 50pm	3 50am
Ar. New York,	"	*6 23pm	*6 53am
Ar. Portsmouth,	S. A. L.	7 25am	5 20pm
Ar. Norfolk,	"	*7 35am	*5 35pm

* Daily.

WESTWARD.

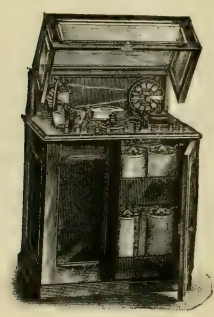
	No. 41.	No. 403.
Lv. Charlotte	10 25pm	7 50am
Ar. Mt. Holly		9 45am
Ar. Lincolnton		10 35am
Ar. Shelby		11 37am
Ar. Ellenboro		12 15pm
Ar. Rutherfordton		12 50pm

†8 40am	Lv.	Hamlet.	Ar. 6 20pm
10 00am	Ar.	Cheraw	Lv. †5 00pm

EASTWARD.

	No. 38.	No. 402.
Lv. Charlotte	*5 10am	8 28pm
Ar. Monroe	5 55am	9 10pm
Lv. Monroe	6 05am	9 40pm
Lv. Marshville	6 25am	.....
Lv. Wadesboro	7 01am	10 31pm
Lv. Rockingham	7 41am	11 05pm
Ar. Hamlet	7 55am	11 23pm
Lv. Hamlet	8 20am	.....
Lv. Laurinburg	8 46am	.....
Lv, Maxton	9 05am	.....
Lv. Lumberton	9 53am	.....
Ar. Wilmington	12 05pm	.....

† Daily Ex. Sunday.



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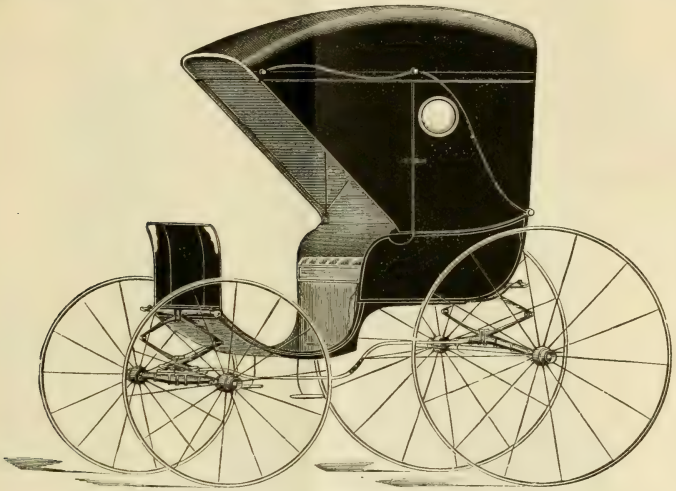

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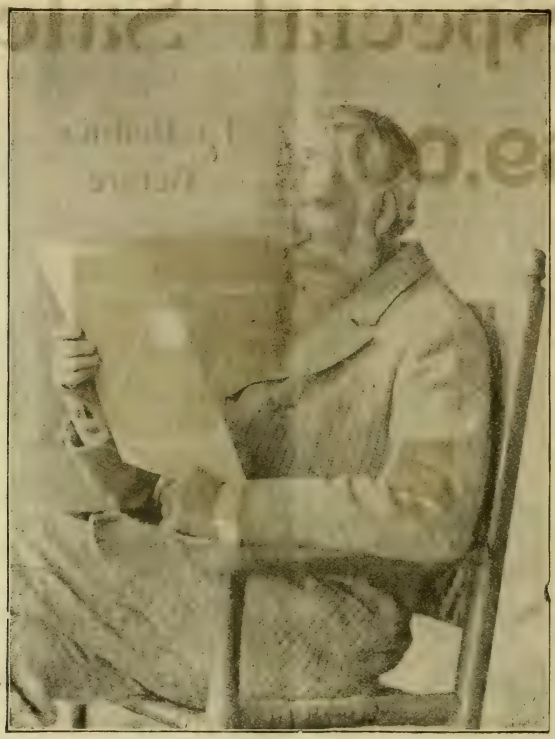

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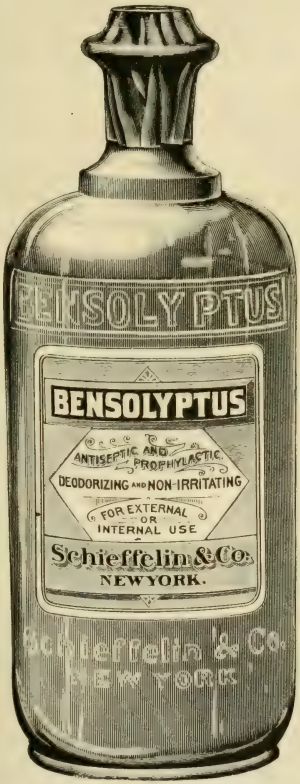

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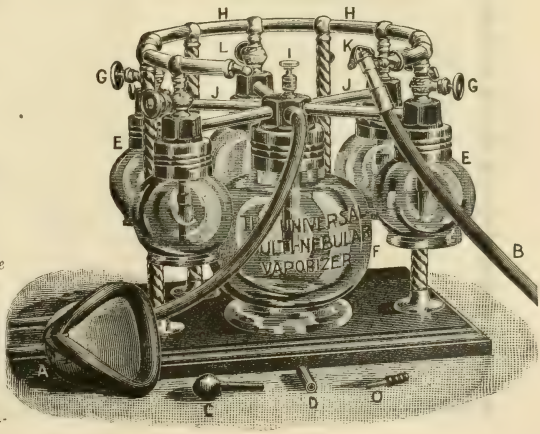

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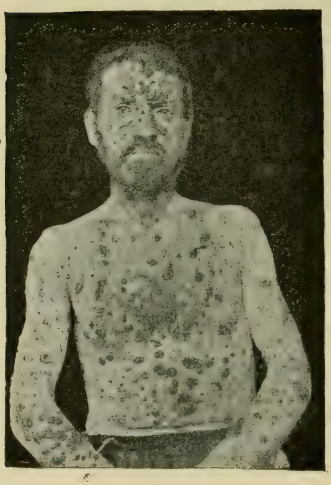

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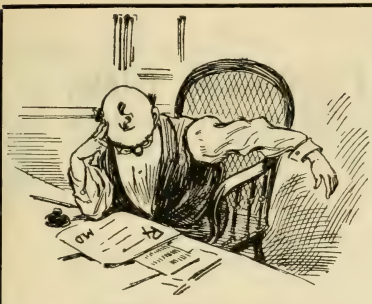

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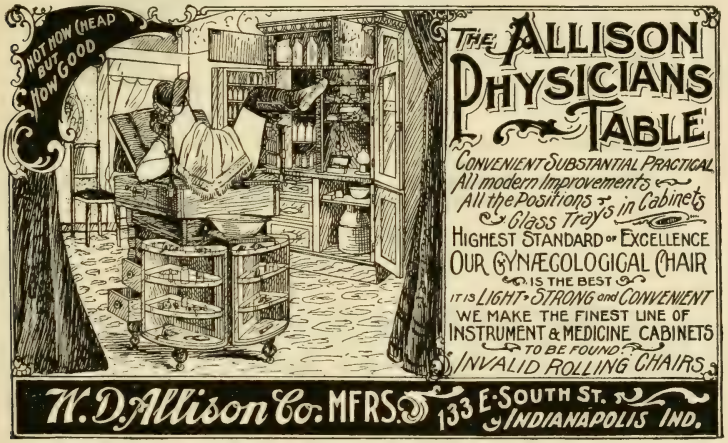
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Fig. XVII—Dorsal Position.

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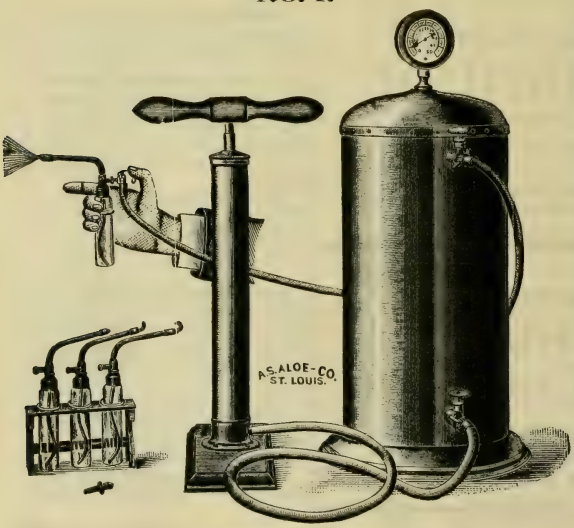

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The Charlotte Medical Journal.

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A few Remarks upon Diseased Bronchial Glands, Associated with Mediastianal Abscess.*

By C. P. Ambler, M. D., Asheville, N. C.

The so-called "Bronchial Glands" constitute that group of lymphatics, ten to fifteen in number, situated at the bifurcation of the right and left bronchus, or upon these tubes or their primary divisions. These glands vary in size from a pea to an almond, receive their blood supply from the bronchial artery, and the same is returned by the bronchial veins. Besides this group of large glands, the bronchi and their branches are supplied with innumerable minute lymphatic glands, but it is with this group of relative large glands that we have to do in this discussion, as it is in these glands that suppuration usually occurs.

"The central group of glands is in relation in front with the pericardium, the arch of the aorta and the pulmonary artery; behind with the pulmonary plexus of nerves, the aseophagus, the aorta and vena Azygos. The ganglion upon the upper, anterior and posterior surfaces of the right bronchus are four or five in number and are smaller than those of the central group. Their situation brings them into relation with the arch of the aorta, innominate and sub-clavian artery, with the brachio-cephalic vein, the vena Azygos, the pneumogastric nerve and its recurrent branch. The ganglia on the left bronchus are in relation with the arch of the aorta, the origin of the left subclavian and carotid arteries, with the large veins, with the left pneumogastric nerve and especially with its recurrent branch."

Considering the important organs in direct contact with or adjacent to these glands, one would, upon first thought, expect to see considerable general manifestation of even a moderate change in their normal physical relation. Such, however, is far from the case.

It frequently happens that it is only in the advanced and aggravated cases that general symptoms become at all marked.

When these glands do undergo enlargement, however, they produce vague and indefinite symptoms, usually of a reflex nature, and which, if considerable care is not exercised, will be attributed to entirely different causes.

The group is regularly enlarged in pulmonary tuberculosis; the enlargement being in many cases, out of all proportion in regard to the extent or seriousness of the lung involvement.

In certain cases the glands undergo enlargement and even suppuration, while the lungs themselves may be entirely free, or at least the symptoms of pulmonary disease are so slight as to escape recognition.

We frequently meet tuberculous patients in whom marked glandular enlargement is found in the axilla, about the neck and especially just over and about the clavicle, but too often do we lose sight of the fact that where these superficial glands are enlarged, the probabilities are that their number and enlargement is slight in comparison to the condition present in the mediastianal space.

Surgical operations are undertaken for the radical removal of such enlarged cervical glands, where, if more minute detail was given to the examination of the chest, the same operation, would in all probability be indefinitely postponed.

These glands become diseased and enlarged in precisely the same way as other lymphatic glands, adjacent to certain organs, become involved when the organ in question is diseased.

It is difficult to see how a primary infection of these glands could have occurred, where no other evidence of disease is found.

Pepper states: "The infection takes place by penetration of the bacilli through the lining membrane of the air passage." Personally I believe these glands usually become infected secondarily, as is so often the case in disease of the lungs, following primary infection at some point along the alimentary canal.

The bronchial glands may be said to participate in the diseases which affect the lymphatic glands generally, and no matter whether associated with pulmonary disease or not, in the large per centum of cases the disease will prove to be tuberculous.

Quain says: "The glands are at first swollen, red and soft as in simple lymphadenitis. On close inspection tubercles may

*Read before the Buncombe County Medical Society, September 5th, 1898.

be seen in the substance of the gland, and very soon there is cheesy necrosis affecting part, and finally, the whole of the gland. Neighboring glands tend to fuse into a single mass, which may be surrounded by more or less resisting connective tissue membrane," thus forming a so-called mediastianal tumor.

The disease may lead to permanent enlargement, to contraction and induration of the glandular structure, with the presence of calcarious deposits or to abscess.

If the glandular mass breaks down completely a cyst containing a puriform liquid results, the walls of this cyst encroaching toward the mediastianal space. The rupture of this cyst is followed by diminution of the pressure symptoms and results in accumulating pus formation in the mediastinum, provided, of course, the rupture is toward the mediastrum. When the pus collection discharges into the lung or bronchi, purulent expectoration results, thus easily misleading one in the diagnosis of the case, if not seen until this stage of the disease has been arrived at. When inflamed the gland or glands may form adhesions with any of the surrounding parts, and the contents be discharged by an ulcerative process, into the substance of the lung, the trachea, æsophagus or blood vessels.

The ætiology of diseased bronchial glands will, in many cases, remain obscure, but it is to local irritation or inflammatory diseases in organs or tissues with which these glands have a connection that the source of the disease may be frequently traced.

As we find the submaxillary or cervical lymphatic glands enlarged from irritation or diseases of the mouth or throat, or the axillary or inguinal glands enlarged from disease in adjacent organs or tissues. so we may find the bronchial glands enlarged, temporarily or permanently from inflammatory diseases in parts, the lymphatics of which pass to these glands.

Acute catarrhal congestion of the respiratory tract frequently leads to more or less temporary enlargement, but it is in tuberculous disease of the lungs that we generally have the cause of permanent enlargement, destructive process and abscess formations.

The glands have also been observed enlarged in certain acute specific diseases, such as scarlet fever, measles and typhoid.

Many pathologists have observed the uniform enlargement in whooping cough, some writers, among whom is Dr. Hugh Ley, in his excellent work upon Laryngismus Stridulus. even taking the position that whooping cough may be a disease of the bronchial glands, due to a specific microbe, similar to that which affects the parotid glands in mumps, supposing the peculiar cough to be due to pressure upon the recurrent laryngeal nerve.

It is certain that in the majority of cases where the enlargement becomes marked, and pressure upon the pneumogastric or recurrent laryngeal nerve results, certain characteristic phenomena appear, such as crowing cough, paroxysmal cough, vomiting, lose of voice and the like.

The symptomology of the disease is governed by the manner of involvement of the glands. When the glands are primarily involved, or when the pulmonary involvement is slight, the symptoms are paroxysmal cough, dyspnœa simulating asthma and hoarseness; in those cases developed during the course of pulmonary tuberculosis, the patient of course presents the usual symptoms of phthisis, but in proportion to the degree of the enlargement, the cough becomes more and more paroxysmal and may be finally quite like that present in whooping cough. Unlike whooping cough, however, these paroxysms may be violent during one day and slight or entirely wanting the day following, only to recur later on with gradual increasing severity.

Of the symptoms, next in importance to cough, is pain. This pain is usually complained of all through the inflammatory disease of the glands as a deep seated and increasing pain, of a boring character, situated beneath the upper third of the sternum.

Tenderness upon pressure over the sternum is usually present after the disease has become marked.

Where abscess formation occurs, and rupture into the mediastinum results, the pain is temporarily relieved, but increases in greater severity as the accumulation of pus follows. If the glandular mass is considerable in size the patient is unable to lie upon the back for any continued length of time, on account of pain from pressure upon the organs beneath. Cases have been recorded where such pressure was sufficient, with the patient reclining upon the left side, to greatly interfere with the action of the heart.

In certain positions the patient will cough, in others he becomes dyspnœic, and still in others suffers more acute pain.

Physical examination may or may not reveal dullness upon percussion, depending entirely upon the degree of enlargement, and the hearing power and skill of the examiner. If mediastianal abscess has already formed and the accumulation is large the dullness will be found both over the anterior mediastianal space and also between the scapulæ, while in all probability a change in the line of percussion dullness follows change of position.

In glandular enlargement without abscess formation the dullness will be more marked anteriorly in the region of the upper third of the sternum.

Auscultation sounds will depend upon the degree of enlargement; usually fine crackling rales are heard along the sternal border; these rales may be either from the substance of the lung or from the pleural surface.

If the patient presents enlarged glands in the cervical or clavicular region it is fair to presume that those on the interior of the chest are enlarged more or less also.

The diagnosis, however, in the majority of cases, must be made "upon the dullness with irregular boundaries, weakness or absence of breathing sounds; upon the unilateral dilatations of the thorax and its incomplete expansion; moreover by the pressure exercised upon different nerves, such as loss of sensibility, voice, paroxysmal cough, etc., upon the constant pain, also upon vascular compression, the symptoms of which in cyanosis, œdema of the face, neck, and upper extremities, and weakness of the radial pulse, and, above all, upon the swelling of the visible lymphatics in the various parts of the body."

The symptoms mentioned above are not by any means always indicative of either diseased bronchial glands or mediastianal abscess; for instance we get several of these same symptoms in aneurism of the aorta; moreover we must exclude pleural thickening, pleural exudation and pericardial effusion.

If the case has progressed to abscess formation with rupture into the mediastianum we here also find the patient complaining of a feeling of constriction, the same dull pain behind the sternum, laryngeal irritation, nausea, cyanosis of the face, headache, vertigo, syncope, dullness upon percussion, bulging of the intercostal spaces and loss of respiration sounds.

With the formation of pus, more fever is present, usually of an intermittent type and associated with severe rigors.

If the pus penetrates the chest wall a fluctuating tumor results, located usually to the left of the sternum at the junction of the fourth rib. The use of the needle will frequently be demanded in arriving at a diagnosis; if pus is found a free incision is always indicated.

Hertz states: "The abscess seldom bursts into the pleural sac."

If one could be certain that the disease in the glands is due to other cause than tuberculous infection, a favorable prognosis might be given; but in the face of the fact that the majority of the cases are tuberculous the prognosis must always be guarded.

Pepper says that "doubtless some cases in which circumscribed foci of tuberculous disease have been present in the lymph glands, recover entirely and calcification of the gland prevents further spread; in other cases a fibrous capsule may limit the spread of the disease for a time; but as a rule the neighboring structures become involved, disseminated tuberculosis results from entrance of the bacilla into the blood."

In the case of mediastianal abscess, the prognosis will depend almost entirely upon the source and freedom of the drainage.

Draining into the bronchi, would of course not be particularly alarming unless very profuse, but would result almost certainly in auto-infection of the lungs.

Drainage through the chest wall would promise best result, and where an opening is made the same should be free, even to resection of the rib if necessary.

The treatment does not differ from that indicated in similar diseased conditions in other lymphatic structures, depending always upon the etiology of the disease.

Cod liver oil, iron, iodine, and particularly the syrup of the iodide of iron, are remedies of value.

Good results have been and are still being obtained from the use of the serum products. Several cases so treated and reported in the Med. Record, Feb. 8, 1896, by the writer are still well and have had no relapse.

In the tuberculous cases where mediastianal abscess results, drainage is everything and if good results are to be expected the same regard must be had to fresh air, good food, a hygienic life and the avoidance of over exertion as is required in all other cases of tuberculous disease.

The idea of this short paper has been, not to present any particular line of treatment for the relief of such morbid conditions, but to bring out the fact that certain vague and misleading symptoms are frequently caused by mediastianal disease. Especially are we prone, in cases of pulmonary disease, to refer and take for granted that certain symptoms are caused by intra-pulmonary morbid conditions, whereas in fact they not uncommonly are caused by such extraneous causes as mentioned,

Moreover, frequently in the examination of the chest, the mediastianal space does not receive its due attention, and finally, that the respiratory sounds as heard in auscultation may be normal while extensive and serious morbid conditions exist in the mediastinum, particularly in the bronchial glands.

REPORT OF CASES.

Case I.—Mr. E. C., age 36 years, expert accountant, been sick for three years with pulmonary tuberculosis. Pulmonary trouble had improved to a point where auscultation revealed no rales or other intra-pulmonary sounds. As improvement in the lungs progressed pain became constant in the region of the upper third of the sternum, finally dullness upon percussion over the same region appeared, expectoration had at this time entirely ceased, but paroxysmal cough remained. His temperature record which for a long time had been running from 100 to 101 and 102 degrees, had gradually decreased to a point where it never went over 99 degrees. For several months he had been feeling in very good health, but still the paroxysmal cough continued. When I first examined this patient it was after he had recovered from his pulmonary trouble and at this time considerable dullness was present in the mediastinal space; he was expectorating large quantities of almost pure pus. This expectoration had appeared suddenly after weeks of intense pain, higher temperature, rapid pulse, shortness of breath and incessant coughing; the symptoms all pointed to enlargement of the bronchial glands. After repeated examination and continued observation, a diagnosis was made of diseased bronchial glands associated with mediastinal abscess. This abscess had finally broken through at some point into the bronchial track. These symptoms after a course of three months treatment gradually subsided, and the patient passed from my observation, still expectorating almost pure pus, but he suffered less pain, less dyspnœa and his coughing was not so distressing.

I have since learned that he is gradually losing in weight, is still expectorating the same material, and, from all appearances, has but a few months to live.

Case II.—Captain P., age 42, steamboat captain, exposed to rough weather all his life. For two years had been suffering from what he had been told was malaria, having during this time run a temperature record varying from 98 to 101 degrees. He suffered more or less constantly from a boring pain in the region of the mediastinal space and had from the first been more or less dyspnœic.

For six months prior to the time when I first saw him he had suffered from a paroxysmal cough, approaching at times to that which is observed in whooping-cough. He had never expectorated anything but a slight mucus, but had for months past complained of pressure in his chest, periodic hoarseness and frequent disorders of digestion.

He had been sent from his home in Savannah on account of "malaria" and had been here three months when he first consulted me. He consulted me first on account of an enlargement which he had observed forming on his chest at the junction of the fourth rib and the sternum on the left side. Exploration with a needle revealed the presence of pus, and a free incision was hence made at the point above described. At this time over two quarts of pus drained from this opening in the course of half an hour, the outflow always increasing if the patient took a deep breath or leaned over when in a sitting position. This discharge kept up for several weeks, gradually diminishing in quantity with the almost total disappearance of the symptoms complained of.

During this time, however, five lymphatic glands in the cervical and clavicular region became enlarged, broke down and had to be incised. The discharge from these glands and also that from the original abscess contained tubercle bacilli. At the time of the first examination, in this case, dullness was present over the entire mediastinal space: Later on, as the abscess drained the percussion cleared up, excepting over the upper third of the sternum. This fact showed, with the previous history and the absence of pulmonary disease, that the diagnosis of mediastinal abscess due to tuberculous bronchial glands was correct. At this time the lymphatic glands have ceased discharging and the fistula from the mediastinal abscess is discharging about half an ounce daily, while the patient has improved in every respect and the outlook has become almost favorable.

Case III.—Mrs. F. Patient consulted me in March 1897. At this time suffering was very aggravated, paroxysmal cough, pain over the mediastinum, dyspnœa, expectoration occasionally streaked with blood.

She had been treated for bronchitis and asthma with no benefit. Examination revealed dullness in the region of the sternum (upper third). Few rales were heard along the sternal border on the right side, bronchial breathing on the left border of the sternum; no dullness could be determined posteriorly; temperature record running from 100 degrees to 102 maximum daily. Patient so short of breath that she could not walk.

She had tubercular family and personal history, and from the present symptoms a diagnosis of tubercular bronchial glands was made.

This patient was treated by counter irritation and daily injections of Fisch's Anti-

phthisic Serum, T. R. After three months treatment the symptoms were greatly relieved.

At this time no trouble is experienced as long as she uses care in regard to her hygienic life.

Case IV.—Miss M., age 22, first consulted me in March, 1898, giving a history of chronic paroxysmal cough. She had been suffering for a year back with so-called malaria, chills and fever. No evidence of intra-pulmonary trouble could be determined; dullness upon percussion was present over the upper mediastinal space in front. This in connection with the cough, loss of weight, varying temperature record and pain in the chest were all the symptoms present. A diagnosis was made of probable diseased bronchial glands.

Early in June these symptoms all became much more aggravated, especially the chills, fever and marked dyspnœa also being present. Ten days later a fluctuating tumor appeared just to the left of the sternum at the junction of the fourth rib. Free incision was made and a large amount of pus drained away. This abscess kept draining until the first of July, when the external opening closed. All the symptoms have been decidedly better since that time and the patient is gaining rapidly in weight. Considerable dullness still remains in the sternal region.

The patient is still under observation, a recurrence of the abscess being anticipated.

4, 5, 6, Temple Court Building.

Microscopical Diagnosis of Typhoid Fever.†

By H. Stuart MacLean, M.D., Lecturer on Bacteriology, University of College of Medicine, Bacteriologist to Virginia Hospital, Richmond, Va., etc.

The diagnosis of typhoid fever in obscure cases can often be confirmed by the use of the microscope. A positive diagnosis can be made by bacteriological examination of the stools, in which the typhoid bacilli will always be found. Unfortunately this method has not become generally used because of the time and labor as well as the variety of appliances necessary. Of late, however, the process has been simplified by the use of certain culture media upon which no bacteria but the typhoid and colon bacilla will grow. Elsner's method consists in the use of a mixture of gelatin, patato juice and iodide of potash, acid in reaction from the acids normally present in the potato. Upon this and other similar substances the development of the ordinary liquifying saprophytes does not occur, and a process which formely took days of investigation and a large array of apparatus, may now be done in much less time and with a very simple outfit.

The bacilli occur in the urine in about 25 per cent. of the cases, hence examination of the urine is apt to be negative. The infected urine usually contains albumen, although in a few cases it has not been present. Late in the disease the bacilli are apt to appear in great numbers. The importance of this observation lies in this necessity for the disinfection of the urine.

A most valuable confirmatory test which is very seldom used is examination of the blood. Cabot,‡ in speaking of typhoid fever, says: "There are few diseases (outside of those known as diseases of the blood itself), in which the blood count is so often of value in diagnosis. The diagnosis of typhoid fever is to be made by exclusion—exclusion of other causes of fever and of local inflammatory processes have leucocytosis while typhoid (uncomplicated) does not." In two cases which clinically appeared to be typhoid blood counts showed marked and persistent leucocytosis, and further developments proved them to be cases of abscess of the liver. This forcibly illustrates the value of blood examination for any deep-seated suppuration. In other cases the blood count has rightly differentiated between typhoid and appendicitis. Late in the disease various complications, such as otitis media, perforation, or abscess, will lessen the value of this symptom, but in the early stages the abscess of leucocytosis is strong confirmation of a diagnosis of typhoid.

Examination of the blood is indispensable in differentiating typhoid from malaria. The absence of the parasite after careful search being both proof that the case is not malaria and strongly confirmatory of typhoid, as these are most frequently confounded.

Occasionally the typhoid bacilli may be found in the blood but so seldom as to render no assistance, and only in typical and severe cases.

Widal's reaction is the most uniformly reliable test at our command. Even this reaction has failed in some few atypical cases. Dr. W. G. Tompson names 23 as the per cent. of possible error. This is not in accordance with the experience of many

†Read at the meeting of the Medical Society of Virginia, Virginia Beach, August 31, 1898.

‡Clinical Examination of the Blood, page 170.

writers. His high per cent. of failures is probably due to the fact that he believes the test to succeed in 12 per cent. where it ought to fail. If the test be properly applied; accurate dilution employed; and the previous history of the patient ascertained with reference to a previous attack of typhoid, such is not the case. Cabot says "Out of over 1000 cases of various diseases not typhoid, but four have been proved to clump typhoid bacilli with proper technique;" and he suggests that even this small error may be avoided by improved technique. The method of applying this test is familiar to you all, consisting in the addition of fresh or dried blood, or blood-serum from the suspected cases, to a twelve to twenty-four-hour peptone bouillion culture of the typhoid bacillus, in a proportion varying from 1-10 to 1-200. Upon examining a hanging drop slide of this mixture, if the cases be typhoid, it will be noticed that the bacteria gradually move more slowly and gather together in groups, ultimately forming large, compact clumps, with few or many bacilli lying between, depending upon the completeness of the reaction. In a typical marked reaction there are no free bacilli, and all motion is lost; in so-called pseudo-reactions there is only partial clumping and partial loss of reaction. The reaction may take place immediately or may be delayed for some hours. The cause of this agglutination, of the significance of which there can be no doubt, is not definitely understood. It is not due to the motility or any other vital force of the bacilli, and Widal and Segard§ have demonstrated that typhoid bacilli in bouillion, destroyed by the applications of a low temperature, or the addition of a small quantity of formal, may be used in place of the fresh culture. Unless the culture thus "embalmed," as Cabot calls it is an active, fresh one the results are not so reliable. This clearly proves that the action of the serum is not germicidal. It has likewise been demonstrated by applying the serum of Arabs, in whom the disease is singularly rare, to cultures of typhoid bacilli with negative results, that the agglutinizing power of the blood is not necessarily connected with either natural or acquired immunity. It seems most likely that it represents the presence of active defensive agents produced in the course of an infection.

While I do not intend to describe the process in detail I wish to call attention to one step. In making the test I have always used the serum obtained from a small fly blister. The fresh blood method obscures the field, while the use of dried blood is inexact and the fibrin leads to false clumping. When the blister has formed sufficiently I withdraw the serum in a glass bulb, which is afterwards sealed at both ends. This bulb is made from an ordinary medicine dropper on a piece of glass tubing. The end is drawn out finely and sealed. Then at a point about one inch distant it is again drawn finely, care being taken not to occlude the lumen of the tube here. We now have a small chamber connected with the rest of the tube by a very fine opening and sealed at the distal end. When about to draw the serum the sealed end is broken off and the point is plunged into the blister, when suction is applied either directly to the glass tube or through a rubber tube, and the bulb filled. Both ends are now sealed in the flame and the bulb may be safely sent through the mail to a bacteriologist or may be kept indefinitely for the purpose of demonstration as during its preparation it is necessarily rendered sterile. This method has recommended itself to me because it allows of accurate and simple technique and by its efficacy.

During the past year I have been called upon to apply Widal's test in 28 cases and in 27 of these the further clinical cause has substantiated the microscopic diagnosis. One case, examined upon the 12th day, did not give the characteristic reaction, and the case ran a typical typhoid course. Unfortunately I did not have opportunity for making another test. These, I might add, were almost all cases in which some doubt was entertained as to the nature of the disease,

The profession at large have in the main failed to utilize miscroscopical methods as aids to accurate diagnosis apparently not because of any knowledge that they are unreliable, but simply through indifference, not realizing that while the laboratory worker may work out these various methods, yet the task of applying them and proving their efficacy most assuredly lies with the practicing physician. Neither is it sufficient to show that a given test is subject to some variation or occasional error, to warrant its rejection: the physician should demonstrate what value there is in it and then use it as occasion arises.

The general practitioner now must use the microscope as he does the thermometer and stethoscope, or have resource to some properly equipped laboratory. It is impracticable that every case be referred to a microscopist. The physician can and now must do much of it himself if he would give the patient the benefit of every means

§Paper read before the Society of Biology, Paris, February, 1897.

that will aid in the diagnosis or treatment of the case.

In closing let me emphasize a few points:

(1) The absence of leucocytosis is strong evidence that an existing fever is typhoid, malarial fever being excluded by absence of the plasmodium.

(2) If leucocytosis does occur in the course of an unmistakable case of typhoid it indicates some untoward indications.

(3) Both feces and urine should be carefully disinfected throughout the course of the disease. Too often directions to this effect are omitted by attending physicians.

(4) Widal's reaction is diagnostic in many cases in which, at the time, the clinical findings are obscure.

(5) The value of serum diagnosis, as well as other methods, must be determined by the practitioner who controls the case upon whom the tests may be made.

Uterine Hemorrhage Occurring about the Menopause.

By Dr. T. J. Beattie, Clinical Professor of Gynecology, Kansas City Medical College.

My object in selecting this subject for a brief paper is to impresss upon the profession the importance of carefully investigating every case of recurring hemorrhage, especially those occurring in women who have passed the middle age of life. When a woman presents herself to me for examination, the prominent symptom of which is hemorrhage, before I make my physical examination I always have in mind the fact that the hemorrhage is only a symptom and the most probable cause will be one of four conditions: 1. Connected with pregnancy. 2. Growth in or about the uterus. 3. Soft, fungoid condition of the endometrium, or 4. Malignancy. It is seldom we find this condition coming on without some cause that by careful physical examination can be ascertained. For years past it has been a belief among the people at large that when a woman reaches the period of decline of the menstrual function, she nearly always has alarming hemorrhagic discharges; so universal has been this belief that when many physicians come in contact with a case of menorrhagia or metrorrhagia in one advanced in life they are satisfied with the diagnosis, that she is in the change of life. Let us consider, for a moment, the significance of the term menstruation, and probably we can treat the subject more satisfactorily.

A girl reaches the age of thirteen or fourteen years, her physical development is more rapid than at any other time, the sexual organs develop rapidly, and in a short time, usually preceded by some feeling of weight in the region of the pelvis organs, and of general indisposition, her menstrual flow appears. This flow recurs periodically unless interrupted by pregnancy, or some pathological condition, and continues at intervals of about four weeks for a period of thirty years when she will have reached the age of forty-five or forty-six years. At this time in life her general system, especially the genital organs, undergo a retrograde change. The periodical flow becomes scant, irregular, and gradually ceases. This is accompanied by a change in the ovaries, they become smaller. The graffian follicles lose their functionating properties and the organs become contracted and hard, and assume a pale whitish appearance. The fallopian tubes, uterus and vagina, in fact the entire genital organs, undergo a change, which is atrophic in character, until they assume as nearly as possible the condition that existed previous to the development of the menstrual function. This is about what is provided for by nature in case she passes the menstrual period physiologically; but it is seldom a woman passes through this period without some condition which tends to leave the uterus or its appendages in a diseased condition, or in a state that will make them more susceptible to the development of disease.

A great deal has been written upon injury to the cervix and its relations to malignant disease. In carefully studying this subject I have made up my mind that lacerations are often an exciting cause for the development of malignant disease, but there must be a predisposing cause beyond this. Our text books say that hemorrhages during the latter period of life may be due to a want of resistance to the blood pressure, softening and relaxation of the uterine tissue, or to vaso-motor disturbances. No doubt this is true, but in a large percentage of cases you will find some other cause which has at least greatly assisted in bringing on this condition. Women who are troubled in this way have usually borne children and frequently it is possible to trace the cause to one of her previous confinements. If involution has been interfered with from a laceration of the cervix or perineum, if the organ is engorged as a result of inflammation of the uterus or surrounding structures, or if a portion of the placenta remains after miscarriage or labor at term, or if from any cause there is an interference to the return circulation, the uterus may become congested, the ova-

ries and tubes may become engorged. If this condition remains, the endometrium is likely to assume a thickened, spongy varicose condition, which often becomes aggravated and frequent hemorrhage is likely to occur. If one is in the decline of menstrual life and this condition exists it is likely to produce alarming, and many times dangerous hemorrhage.

Some months ago I was called to a neighboring town to see the wife of a minister who, the doctor said, had been having recurrent attacks of a hemorrhagic discharge from the female organs. This had become quite profuse and he was in doubt as to the cause. After getting a careful history of the case and making a physical examination I was of the opinion that no malignancy existed. The uterus was large and tender, and the cervix patulous. The sound passed to depth of two and one half inches. The endometrium was soft, varicose and spongy. The woman said, "Doctor, I know what is the matter with me, I am in the change of life." This condition was corrected by thorough curettage and irrigation; her system built up by tonics, fresh air and good, nutritious food. She made a complete recovery and since has been in excellent health. My attention has been especially directed to this subject on account of a number of cases that have come under my care, where extensive lacerations about the cervix have existed, and I am of the opinion that they act as a factor in causing the trouble. Some one may ask why has the laceration not troubled them before?

A woman may have quite an extensive injury to the cervix and her general health not become seriously impaired, but if much cicatricial tissue exists, and a woman reaches the time in life when the organ undergoes a retrograde change, which is a lessening in size of the uterus, this atrophy is more likely to be unsymmetrical, the cervix may become closed or very small in size while the body is still large; the glands of the endometrium remain active; in this way we may have gradual accumulating fluid that may, at some future time, be expelled and keep the organ in a state of congestion. My attention was first directed to this subject by an article entitled "The Menopause" by Prof. T. Gaillard Thomas in which he says: "As the uterus undergoes atrophy that of the cervix may be out of proportion to the atrophy that is going on in the body. As the body of the uterus contracts, the cervix contracts to a greater degree and gradually closes, while the uterine mucous membrane is still giving forth a discharge of mucus, which any uterus is apt to do, and the cervix shuts itself up together and prevents the escape of this fluid." I am of the opinion that this is more likely to occur in women who have received extensive lacerations that have never been repaired. At this period of life we may come in contact with cases where no trace whatever can be made as the result of gestation. It is a singular fact that some women have a susceptibility to hemorrhagic attacks where no perceptible cause can be ascertained, but simply an inherited tendency to a highly vascular and relaxed condition of the organ These cases are not common, but when it exists the decline of menstrual life acts as a factor in causing these attacks to occur. Growths in or about the uterus will often cause this condition. We may have a large fibroid in the walls of the uterus, or a polydus suspending itself from some part of the endometrium.

Some months ago I was consulted by a lady who is past forty years of age and the mother of several children. She said she had been treated by a physician who for some months had been treating her locally for disease of the endometrium. I examined and found she had a sub-mucus fibroid as large as an ordinary child's head at term. This I succeeded in moving through the vagina and she has recovered from her troublesome hemorrhages and pain during menstruation, and is a hale, hearty woman.

There is another class of cases the early detection of which is of great importance. I refer to malignant disease existing in the cervix or body of the uterus. It is for the possible existence of this disease that physicians should always inquire carefully into the etiology of hemorrhagic discharge during the later period of life. When malignant disease exists and can be discovered early we are in a position to do more to alleviate her suffering and prolong life than we have ever done before. For ages this disease even in its incipiency was looked upon as probably the most serious of all ailments. Quacks, in their eager endeavor to deceive patients, have contended that they have specifics for the cure of cancer, but as yet we have not found a remedy that will eliminate from the system the real cause of this very troublesome and dangerous disease. When it can be detected in its incipiency and entirely removed its growth may be stopped at least for a time, but the cause still exists ready to spring into activity and produce trouble in the most susceptible organs. It has been a disputed question among the leading pathologists and clinical investigators as to whether or not this disease is of local origin, but as I stated in the beginning of this paper I think it has been

quite satisfactorily demonstrated that there must be a predisposing cause.

In this brief paper I do not care to discuss this question but to emphasize the importance of carefully investigating every case of menorrhagia or metrorrhagia occurring at the decline of menstrual life, and many times you will find a cause, the relief of which will overcome the troublesome hemorrhage.

The Technique of Tonsillotomy.

By Geo. L. Richards, M. D., Fall River, Mass., Otologist and Laryngologist to the Fall River and Emergency Hospitals; Member American Laryngological, Rhinological and Otological Society; American Medical Association, etc., etc,

Many children and some adults have enlarged tonsils which interfere with respiration, talking, swallowing and perhaps hearing. Shall the tonsil be removed or not? Briefly whenever it is evident that the tonsil is at fault, especially if there be recurring attacks of inflammation, it is better to remove at least the hypertrophic portion.

The normal tonsil should be just visible as to its free surface when the mouth is widely open, lying between the anterior and posterior pillars of the fauces. The hypertrophic tonsil is a source of annoyance mechanically, as well as on account of the liability to inflammation of its crypts. These are often filled with cheesy deposits, liable at any time to cause a tonsillitis. It has recently been demonstrated by Goodale that a certain amount of absorption into the blood takes place through these crypts, hence an added danger in cases of the infective diseases affecting the throat. Normally the anterior and posterior pillars should be free in their movements, so as to take part in deglutition and phonation; if the tonsil is attached to both of these it hinders their movements and becomes a source of annoyance to the individual, even though there be but little projection from the surface. Such are the large flat tonsils which are so difficult to remove.

Supposing it is decided to remove the tonsil, how much shall be removed? Dr. Coulter, of Chicago, and some others, advocate the removal of the entire gland. In some cases this may be necessary, but in the main it is sufficient to remove all that projects from, and is attached to, the anterior and posterior pillars. And here let me warn the operator against promising that there will never be another attack of tonsillitis. Unless the gland is entirely removed, some crypts and some portions of the gland will remain and be liable to inflammation. As a rule there is no further trouble, but one can not positively promise that there never will be.

The choice of an instrument is largely one of taste. If the operator is a specialist, he will require a number of instruments; if a general practitioner, operating but seldom, a medium sized Matthieu or Mackenzie tonsillotome will answer most purposes. The cold and hot wire snares have their advocates on account of the lessened danger from hemorrhage in their use. They are, however, often difficult of application, and are not as generally used as some form of cutting instrument. Certain auxiliary instruments are needed; two or three pairs of long handled curved scissors (Emmet's right and left uterine scissors answer every purpose); two pairs of long handled hæmostatic forceps, some sort of instrument for separating the adhesions between the tonsil and the pillars, a cotton applicator or two, a good tongue depressor, and for children, a mouth gag. For tonsils that are quite flat the Mackenzie tonsillotome, with the blade cutting from the operator, will do better work than the Matthieu, with the blade cutting toward the operator.

When we have decided to remove the tonsils, which are of average size, how shall it be done? What are the steps in the operation? If the patient is inclined to be unruly, use anæsthesia. This will frequently be necessary with children and is decidedly preferable to a struggle with a frightened or unwilling child. At the same time most cases of tonsillotomy, even in children, can be done perfectly well with cocain. Have an assistant, either a physician or a good nurse. The assistant looks out for the patient's head, the spitting, towels, &c., and is generally useful. Place the needed instruments on a stand where they can be got at in a moment without having to get up. Have ready some absorbent cotton, a bottle of peroxide of hydrogen and some hot water. Very small children should be held, others may sit in a straight backed chair, never a rocking chair. Unless accustomed to the forehead mirror, use a good north light, so arranged as to shine full into the patient's mouth. Always be prepared for hemorrhage. It will not infrequently come. By hemorrhage, I mean troublesome, persistent bleeding, lasting longer than a few minutes. Cocainize the fauces and tonsil with three or four applications of a 4 per cent. solution. While this anæsthesia is of the surface principally it very materially mitigates the pain of the

operation. As soon as anæsthesia is attained examine carefully to see whether there are any adhesions of any account to the pillars, and if so carefully separate these. The bleeding from this is trifling. A little more cocain can now be painted on. With a child you may or may not use the mouth gag; it depends on the tractability of the child. Have a good strong tongue depressor. With the assistant firmly holding the head and pressing on the corresponding side of the neck, the operator keeping the tongue firmly depressed, introduces the tonsillotome, carrying the lower side of the ring as low down in the throat as possible, embracing the under or lower side of the tonsil first, lifting it up and then pressing the upper side of the ring over the top. In this manner the whole tonsil is much better embraced than if the process is reversed. If the tonsil is now firmly embraced use the knife and cut slowly off. The bleeding will be less if the knife is not too sharp. The error often made is in cutting off the top of the tonsil, while the lower portion, which if anything is the most troublesome, remains behind. Now do the same thing on the other side and allow the patient to spit out the blood, carefully observing the amount of blood which follows.

Examine now at once and see whether any remnants or rough portions have been left behind, and if such is the case take the scissors and clip them off, so as to leave a smooth surface. In from three to five minutes the bleeding which was at first profuse should have mostly subsided. Supposing it has not done so and bright blood continues to be spit out pretty steadily, and the operator begins to feel uneasy and the patient it may be gets a little frightened, what is to be done? Here let me say that although fatal cases of hemorrhage are almost unknown. troublesome hemorrhage is more or less frequent in the experience of every one who operates at all often. To return to our patient, who is persistently spitting blood in the basin, very bright blood too. A host of hæmostatics are mentioned in the books, tannin, alum, Monsel's solution, hot water, ice, &c. They are all nasty and unsatisfactory except the hot water and ice. This is what I do: I carefully inspect the cut surface of the tonsil for the site of the hemorrhage, which usually comes from one or more small branches of the tonsillar artery, there is practically no danger of cutting either carotid, as both lie too far to the side to be reached by the instrument. If there is simply persistent oozing have the throat gargled with a 25 per cent. solution of peroxide of hydrogen in hot water. Peroxide of hydrogen is an excellent cleanly antiseptic hæmostatic. If the gargling is insufficient soak a pledget of cotton in pure peroxide and apply pressure directly to the cut surface of the tonsil. In the great majority of cases the bleeding will promptly stop. This is not always the case however. Suppose there is a bleeding point which, as in a recent case of mine, spurted. Wipe the surface carefully and quickly with a bit of cotton and apply your long hæmostat directly to the bleeding surface, using one or more as needed. If properly applied this is effective and the patient, whose mouth is probably somewhat sore from the much manipulation can close the mouth and rest.

Allow the hæmostat to remain in position several minutes, then before removing, twist the tissues somewhat, or if the point only of the hæmostat is engaged, it may be twisted off, thus effectually closing the vessel by tortion. This is an absolute thing as far as my experience with hemorrhage goes, and provided with hæmostats I now do tonsillotomy with very little dread of hemorrhage, as I am prepared for it if it comes. Should no hæmostat be at hand pressure of a piece of cotton under the thumb with the corresponding finger on the vessels of the neck will usually suffice to quickly stop the bleeding. Keep the patients in your office or remaining at the place where the operation is done for at least two hours, examining the throat carefully before they are allowed to go home.

It very frequently happens that the bleeding ceases only to start up again after the first clot is dislodged by the patient's efforts at retching. Two examples will illustrate this: A young woman, aged 28, with comparative small tonsils, very adherent to the pillars. The adhesions were separated, the tonsils removed, the throat gargled with peroxide of hydrogen. She was given a dish to spit into, and I went on with my work. There was no bleeding for an hour and as it was lunch time, I left her for about fifteen minutes expecting to find on my return the bleeding stopped and she ready to go home. To my surprise, she was spitting bright blood and feeling weak. On examination, I was unable at first to tell from which tonsil the bleeding came. I applied a wad of cotton with the pressure of the finger, at first on one and then on the other side, and then carefully examined the throat. I was rewarded by finding two small spurting vessels close together, throwing their blood stream directly on the opposite tonsil, which accounted for the fact that there was fresh blood on each. I promptly applied a hæmostat, left it in place a short time and then twisted it off. The bleeding stopped instantly

and there was no further trouble, and in another hour she was allowed to go to her home; no bleeding followed. The other case is that of a six year old child, who began to spit bright blood some three-quarters of an hour after removal. Here a gargle of peroxide of hydrogen and pressure for a moment of a cotton pledget soaked in peroxide sufficed to stop the bleeding. Adults, therefore, I keep under observation about two hours and children at least an hour. For home use I advise a gargle of peroxide of hydrogen in water, about 25 per cent. solution, to be used occasionally, and tell the patient, should bleeding start up, to have some one apply pressure with cotton on the finger directly to the tonsil and send for a physician. Frequent gargling is not advised as it tends toward dislodgment of the already formed clot. But little after treatment is needed. Expect some soreness; the daily spraying with an antiseptic alkaline solution is all sufficient. Let the patient's own feelings be a fair index as to diet—in general give liquids for a few days.

A white deposit will form over the cut surface which is not diphtheria, although it has happened that it has been so diagnosed. It is merely an attempt on nature's part to protect the cut surface while healing is going on.

If for any reason the cutting operation, or the snaring operation, is deemed inadvisable the tonsil can be quite effectually cut or reduced in size by means of the tonsil knives of Leland. These are curved probe-pointed knives right and left attached at right angles to a handle. They are introduced as deeply as possible into the crypts and then made to cut their way out. The resulting tabs of tissue are easily removed with scissors, and the bottoms of the crypts can be cauterized with the chemical or electric cautery. In adults who suffer from recurring attacks of tonsillitis, and who yet dread a radical operation, this method answers very well as the crypts can be very effectually destroyed and the gland reduced thereby. I usually use this knife for separating the adhesions between the tonsil and its pillars. Having a probe point the adhesions are separated with the minimum of pain and bleeding.

Statistics of life insurance companies show that in the last twenty-five years the average of woman's life has increased from about forty-two to fifty-six years, or more than eight per cent. In the same period man's life on the average has increased in length five per cent.

Acute Appendicitis in Children with Report of Cases and Remarks.*

By Edward McGuire, M. D., Richmond, Va.
Professor of Gynæcology University College of Medicine, Richmond, Va.; Gynæcologist Virginia Hospital, etc.

It has fallen to my lot to see a number of cases of appendicitis in children in the past few years. Some were of interest, which I will report briefly.

Case 1st.—O. W., boy, age 7. Saw him 18 hours after the first symptoms of pain. The boy stated that he had been injured in the abdomen, while at play the preceding day. Temperature 102 degrees. General abdominal tenderness, more marked on right side. Pain in the epigastric region. These symptoms went on until the 8th day. Abdominal section revealed an abscess adherent posteriorly. The abscess was opened and drained through the loins, and the abdominal wound closed. The appendix was not removed, and recovery was uninterrupted.

Case 2d.—P. C., girl, age 4. Saw her a few hours after the commencement of the attack. Her mother had given her a purgative, which I repeated, thinking the attack was due to indigestion from imprudence in eating fruit. Pain was in the epigastric region. There was no tenderness or nausea. The next morning a tenderness was marked in the right iliac region. Increased rigidity on that side. The pain throughout the attack was referred to the epigastrium. Diagnosis of appendicitis made, and operative interference was suggested and refused. The symptoms continued with exacerbation until the 9th day, when the parents saw the child would die unless something was done. They wished another consultant; he opposed the operation, saying the child would die either way. At last consent was given, and the operation revealed an adherent abscess, which was opened and drained. The appendix was not removed. Recovery was uninterrupted, except an acute nephritis, which lasted a week; the result, perhaps, of septic absorption. There was no recurrence of trouble after the operation. At the time of the operation, the temperature was normal.

Case 3d.—W. C., boy, of North Carolina, age 8. Fifteen days had elapsed since commencement of attack. While he was on his way to the hospital for operation, his accompanying physician thought he would die before he reached Richmond. When I

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saw him, on his admission to the Virginia Hospital, his pulse was about 140, and feeble; incessantly gulping up dark fluid; face pinched and drawn; abdomen very distended; obstruction complete; every indication of peritoneal sepsis. Section revealed a large abscess, filling up the pelvis and reaching up to the umbilicus, covered with matted coils of intestine and septic peritonitis. Realizing there was no chance to enucleate the abscess wall, I carefully and gently tried to find a point adherent to the abdominal parietes. In doing so, the abscess ruptured. I then attempted to enucleate it, which was most difficult, requiring extensive resection of the gangrenous bowel. The child never reacted, but died five hours later. I considered this case hopeless from the beginning, and so informed his physician before the operation.

Case 4th.—C. S., girl, age 8. Commencement of attack five days previous to entrance in the hospital. When I saw her she was in a profound septic condition; pulse about 140; very feeble; face pinched and drawn; abdomen enormously distended; complete obstruction. Section disclosed diffused septic peritonitis: intestines removed, wiped and washed thoroughly; necrotic appendix removed and thoroughly drained, extending in differeni directions through the abdominal cavity. She died the next day.

Case 5th.—F. S., girl, age 5. Had three well marked attacks of appendicitis, one attack lasting ten days before the symptoms subsided. An inflammatory mass distinctly felt in the right iliac region. Symptoms never acute, but section about ten days after the last attack revealed an inflamed appendix, somewhat thickened with adhesions. Recovery rapid and uninterrupted.

Case 6th.—E. R., boy, age 9. Brought to the Virginia Hospital with the history of the attack commencing five days previous. General condition good. Temperature 102 degrees. Some distension, and marked tenderness in right iliac region. Mass distinctly felt. Operated on one hour later; found a necrotic appendix surrounded by a small abscess, containing two ounces of pus. Adhesions were bad. Removed about three inches of the omentum, and the necrotic appendix. The adhesions were broken up and gauze drainage used, followed by rapid recovery.

Case 7th.—Boy, age 5. I report because of the obscure symptoms, but it was not my case. His physician, who had left the city, had seen him the two preceding days without arriving at a diagnosis. I was called in during his absence. The child had been taken sick on Thursday. I saw him the following Saturday evening, and, knowing nothing about the case, I examined him very carefully. His physician—a very skillful one—told his parents that he thought it an attack of acute gastritis. The child was vomiting incessantly; temperature 103 degrees; delirious; face very much flushed; tongue red and dry. He had never complained of any pain; bowels had moved regularly. I examined his abdomen most carefully. There was no muscular rigidity or swelling. The appendix could be pushed backwards against the spine, without eliciting any discomfort. There was no evidence of any abdominal lesion. I was inclined to think the condition was of cerebral origin. His physician returned on Monday, and took charge of the case. On Wednesday, the first symptoms of appendicitis developed. The surgeon told me he found a gangrenous appendix surrounded by a small abscess. The child recovered.

Case 8th.—H. M., boy, age 10. Had been sick about a week when he entered the hospital. His temperature had been high until the day before entering the hospital. At the time of the operation, it was normal; abdomen distended; large mass in the right iliac region. Operation revealed a large abscess attached to the abdominal wall, which was drained. Appendix was not removed. Recovery uninterrupted.

Case 9th.—S. P., boy, age 11. Saw him shortly after the attack commenced. His mother had already made a diagnosis. The case was a typical one; fever reaching only once as high as 103 degrees. None of the symptoms were wanting. After 24 hours I advised operative interference, which was refused. In 48 hours the boy was convalescent. This is not the only experience of this character I have had. It has happened to me a good many times.

Appendicitis in children, before the age of four years, is very rare. One case so young as seven weeks is reported by Deeme. Matterstock and Fitz each report a case of 20 months. Fowler operated successfully on one of 23 months. After the fourth year, it is a very frequent occurrence through childhood, but especially so after the tenth year. Of 104 cases, three were under three years, forty-seven between the fourth and ninth years, and fifty-four between the tenth and fourteenth years.

The influence of sex on appendicitis holds good in children as in adult life; of 101 collected cases under fifteen years, 72 were males and 29 females. Fowler states, from his experience of all cases seen, the proportion of males and females was about the same. The natural death rate in children, from appendicitis, is higher than in the

adult, and varies according to different authors, from 25 to 45 per cent. I am sure these statistics are too high. A great many cases that end in resolution are overlooked; or, if diagnosticated, are called acute indigestion, colic, "bilious attack," etc. This error in diagnosis was especially frequent previous to the last five years. I am sure I have made this mistake in the past. In the incipiency the symptoms are identical with those of acute indigestion, perhaps so for the first 12 or 24 hours, and we are all aware of the magnitude, the variety, and the numerous symptoms, this little condition may produce, That the symptoms are ephemeral in character is an important point in the diagnosis.

Holt, in his work on children, states that of 112 cases there were 62 recoveries and 50 deaths—a mortality of 45 per cent. In 43 fatal cases, nearly all died of general peritonitis. Six died in the first three days; 19 from the fourth to the seventh day; 13 in the second week, and 5 in the third week. He also affirms that recurrence is not so frequent in children as in adults; it being noted in only two cases of this series. The younger the child, the greater the danger.

Mattenstock reports that, out of 12 patients below the age of six, all died. Between the age of six and ten the prognosis is more favorable. 24 cases—15 deaths.

The intensity of an individual symptom is more marked in children than in adults, but these individual symptoms are as easily misleading in some cases. This is probably due to the greater impressibility of the general and nervous systems of childhood, and to the lack of proper discriminating powers to analyze the symptoms. The physician who looks and waits for the typical symptoms of appendicitis, will frequently err in his diagnosis, and he who asserts that it is always easy to diagnose it displays his ignorance, and a lack of very much experience of this disease. This remark holds good in the adult, as well as the child. The case reported as No. 7, and the following, bears out this statement.

I was called to see a case on June the 9th, at 10 P. M., in consultation. The physician stated that six days previous he had been sent for, and made a diagnosis the next day of a slight attack of appendicitis; so slight were the symptoms, that it was not believed by the family. In three days all the symptoms had disappeared. There was no fever, no pain, no tenderness, and the pulse was slow and normal. He thought the patient convalescent. This condition continued until the night I saw her. The first symptom that alarmed him was that the nausea returned, and a pain on the right side, located a little to right of right nipple. On examination of the abdomen, I found there was no tenderness over the appendix, no lump, no rigidity, no abdominal distension, no fever, no pain, and pulse 70. There was not one local symptom of appendicitis. She complained of pain near the right nipple, intensified with respiratory movement, similar to that of pleurodynia or pleurisy. She also complained of a violent pain in the top of her head. Her facial expression was not good. Relying chiefly on the early history of the attack, I stated as my opinion that the appendix was the cause of the trouble, and advised, if she was not better in the morning, that she be removed to the hospital. The same conditions were present in the morning and at the time of the operation. I found a gangrenous appendix imbedded in a mass of infected adhesions, which were removed. When she awaked from the chloroform, the pain in the chest and head had disappeared. Her whole system was saturated with the toxins, and she succumbed from suppression of the urine and sepsis.

We all know that the diagnosis in typical cases is based upon—1st, the suddenness of the attack; 2nd, the presence of abdominal pain; 3d, tenderness and muscular rigidity in the right iliac region; 4th, some nausea attending, or following the pain and in a large number of cases some febrile disturbance. The first condition is applicable to nearly all abdominal troubles. The second condition, or abdominal pain, is more variable. In the majority of cases it is referred to the umbilical region, or epigastrium; afterwards, it becomes more centred in the right iliac region. Pain is a very variable symptom as to its location and intensity. It may be referred to any portion of the abdominal cavity—to the chest or to the lumbar region—on account of the extensive distribution of the abdominal sympathetic system. Another reason why its location is variable is that the position of the appendix is not constant. It may lie to the inner side, to the outer side, or behind the cæcum. It may be directed downward to the right iliac fossa, or upward to the right kidney behind the liver, or may extend across the abdominal cavity. I have seen these positions present in appendicitis. Pain is variable and misleading. It may be violent, or may be so slight as not to deter the child from playing. It does not indicate the pathological conditions present. It may be intense in a case of slight catarrhal appendicitis, and absent in a gangrenous appendix. I remember seeing a case in consultation, in which a boy was skating at 11 o'clock the night before, was operated on

the next morning, and a perforated appendix and an abscess holding three ounces of pus, with extensive adhesions, were found. Local tenderness in the right iliac fossa is almost a pathognomonic of appendicitis, as is the rusty sputa of pneumonia. At first the area of tendency may be large, but soon becomes more centred, corresponding to McBurney's point. This is not by any means constant. It varies with the position of the appendix. I have seen it in the lumbar or epigastric region, and in one case, with a long appendix, some distauce to the left of the umbilicus. Again, tenderness may be entirely absent. A case with complete gangrene of the appendix may be free from pain and tenderness because it is dead, nerves and all.

Muscular rigidity is usually present, but it is not equally prominent in all cases. This rigidity is more marked on the right side, and, in the majority of cases, lessens or disappears in a day or so. The prominence of this symptom seems to have some relation to the proximity of the inflamed appendix to the anterior abdominal wall. Care should be taken not to mistake rigidity of the muscles for a tumor. Anæsthesia is a valuable aid, especially with children, in this examination. As it disappears in about two-thirds of the cases a tumor, with or without pus accumulations is frequently found in the right iliac fossa, formed from either the plastic exudate, or agglutination of the omentum and intestines. It varies in size and position.

Nausea is usually a more prominent symptom in childhood than in the adult. It is not continuous. The acuteness of nausea occurring later in the disease often marks the advent of perforation, and onset of aseptic peritonitis. Fever is nearly always present in the earlier stage of the disease, and is higher then than later. It does not indicate the seriousness of the condition. A slight catarrhal appendicitis may produce a temperature of 104 degrees, F. Again, it may be absent or subnormal in the more serious forms. I have seen cases with a gangrenous appendix, or an abscess containing from a pint to nearly a quart of pus, with little or no temperature. The pulse is a far better indication of the gravity of the disease than the temperature, though both may be normal in a gangrenous appendix, when the toxins are not escaping into the system. The facial expression in the milder cases, and even in many of those when localized suppuration occurs, is not marked, on account of a protective peritonitis. The toxins are not, or, if so, are slowly absorbed. In the severe conditions when there is a gangrenous appendix, and the toxins are being rapidly formed and absorbed, as in the fulminating form with septic peritonitis, the face is often the greatest indication of the condition. There is one potent fact, and it should have great weight in dealing with the diagnosis in children. It is that an acute peritonitis very rarely ever occurs in childhood from any other cause than appendicitis. The same holds good in the adult male. It is therefore right to indite the appendix in all peritoneal inflammations, unless other determining causes are well established.

In my remarks I have considered the subject briefly, and have omitted many of the minor symptoms of appendicitis; nor have I grouped those belonging to the different forms and complications. They are numerous and confusing. I have considered it from a clinical experience, and have endeavored to show that, while a large majority of cases are typical and easy of diagnosis, there are many that are atypical and perplexing to the diagnostician. What is still more important is that in a large number of cases, no one symptom, or aggregation of symptoms, nor is there any amount of clinical experience. or ability as a diagnostician, that will enable a surgeon to foretell the consequences, or to recognize the true pathological conditions in the case of appendicitis. It is the recognition of this fact that has induced so many surgeons to endorse early surgical interference in all cases, as soon as the diagnosis is made, or even in the obscure ones, where the appendix is indited on suspicion only. Medical authors on children are adopting this view.

Rotch, in his work on pediatrics, saye that appendicitis is essentially a surgical disease, and is one which should be placed immediately in the hands of one skilled in abdominal surgery. Again, he says that the prognosis is very favorable if operative interference is instituted early.

Hare states that the case should be viewed as one likely to become surgical at short notice, and as soon as the diagnosis of progressive appendicitis is assured, the abdomen should be opened; that a case not well on the road to recovery at the end of the first day should be deemed progressive and subjected to operative interference. At the same time he recognizes that septic peritonitis may ensue from a very virulent infection, before there is either perforation of the appendix or rupture of the abscess cavity.

Holt, in his book on diseases of children, claims that in the majority of cases it is a surgical disease, and that many cases have

been needlessly sacrificed because surgical interference has been delayed.

We know, in cases treated medically, the mortality depends on the virulence of the infection. In those treated surgically, it is in proportion to the delay in instituting operative interference. We are aware that a great many mild cases recover, but also know that a large number are lost, both with the operation and without it, that were mild cases in the beginning. Simple cases have a low death rate, medically treated, but a still less one, surgically. Grave cases have a high death rate, medically, and a small one, surgically, if operation is not delayed. Taking this view of the subject, it is true that we may operate in some cases unnecessarily, but it is far better to do this than to operate unsuccessfully. A comparison of statistics as regards the percentage of recoveries by the two methods, is unfair, because a large number of cases referred to the surgeon are grave ones that have been treated medically with failure, and, as a last resort, seek surgical interference. Again, the percentage of successes reported by individual surgeons is misleading. The surgeon may refuse to operate in bad cases, which he thinks are likely to die, because he does not wish to injure his statistics. I have heard of this being done. The surgeon who operates on a grave case, that is one of the perforative and suppurative variety, with bad adhesions, and saves the life of a patient, deserves more credit than the operator who saves nineteen out of twenty simple cases. The operation may be one of the simplest in surgery or may be the most difficult. The pathological conditions to be met can never be foretold. It is impossible to impress upon the laity this fact, as well as upon a great many physicians. Again, a surgeon may refuse to operate in a desperate case that he considers has been seen too late, *pro bono publico;* it certainly has a great weight with the laity, and is likely to induce the physician, who may have been prejudiced against operative interference, to refer his cases earlier to the surgeon. Perhaps more lives in the end may be saved by refusing to operate in such a condition, but I could never bring myself to adopt this idea, as some of the most desperate cases recover after operation. I remember a case lately that was brought to the Virginia Hospital in such a condition—complete obstruction for two days; enormously distended abdomen; pulse rate high, with an incessant gulping vomit; every indication, I thought, of septic peritonitis. Still this patient recovered after the operation, though it required intravenous saline infusions to keep him alive during the operation.

The operative technique in children differs in no essentials from that in adults, and therefore will not be considered. Each case must be dealt with individually, as the experience of the surgeon dictates, there being scarcely any two cases alike. Time is an important element in dealing with these cases in children. more so than in adults, a prolonged operation greatly increasing the danger. In adherent suppurative cases, I do not think it necessary to attempt to remove the appendix, unless it is found floating or projecting free into the abscess cavity. Otherwise the removal, or the attempt, may break down the barrier nature has so wonderfully provided. I have seen a large number of such cases, and have found no after trouble resulting from this method. It is remarkable to see what nature will do in removing the exudate that has been thrown out in these localized, suppurating, and plastic cases.

A short time ago I operated on a man for acute intestinal obstruction successfully. He had had suppurative appendicitis about a year previous, and had been operated on by one of the young graduates of the University College of Medicine, Dr. Davis. The doctor had only a storekeeper to give chloroform and aid him in the operation. A pocket case constituted his instruments. On opening the abdomen I found a small band about $\frac{1}{8}$ of an inch wide across the ileum, about three feet above the ilio-cæcal valve. On examining the site of the old abscess, I was struck with the small amount of adhesions present, which was easily broken up.

Diagnosis of Bullet Wounds of the Abdomen.†

By Hugh M. Taylor, M. D., Professor of Practice of Surgery, University College of Medicine; Surgeon, Virginia Hospital, etc., etc., Richmond, Va.

The Surgeon's interest in gunshot wounds of the abdomen is largely focussed, 1st, in the diagnosis, and 2d, in the treatment. The diagnosis involves a differentiation between (a) non-penetrating and penetrating wounds of the abdomen; (b) between penetrating wounds with those without visceral lesion, and (c) between lesions of hollow and solid viscera.

Diagnosis of Penetrating from Non-Penetrating.—Are we able with any de-

†Read before the Medical Society of Virginia, September 1st, 1898.

gree of certainty to differentiate between the penetrating and non-penetrating gunshot wounds of the abdomen? In the absence of rare evidences, furnished by protrusion of the abdominal viscera or their contents, we can only ascertain positively the existence or non-existence of penetration by a careful dissection along the tubular wound tract through the abdominal wall. This conclusion not only accords with our own limited experience, but is in keeping with the progressive surgical thought of the day.

The Use of the Probe.—With few exceptions, the use of the probe to ascertain the extent of the wound in the abdominal wall is discouraged. Not until the probe has been sterilized, and not until the tubular wound tract has been asepticised, can we without danger of increasing infection, resort to probing such a wound. The truism of Nussbaum that "the fate of the wounded rests in the hands of the surgeon who applies the first dressing," should, we think, be persistently impressed, as also the equally imperative injunction "never to probe a wound of any character, and especially one of the abdomen, until probe, wound, and surgeon have been asepticised," are surgical truths which we cannot reiterate too often.

The finger has been poetically styled a probe with an eye in it. We would urge that the finger needs to be especially well sterilized before it is used to explore a wound. Apart from their potency for evil, the use of the probe or finger as diagnostic means are very unreliable. Movements of the skin, muscular planes, and fascials renders it difficult to guide the probe or finger along the tubular bullet tract, and the loosely attached peritoneum may be pushed inward by either probe or finger—giving the impression that the peritoneal cavity has been entered. Circumstantial evidence is elicited by examining the character of the wound of entrance and ascertaining a knowledge as to the distance traveled by the bullet. The larger the bullet, obviously, the larger the wound of entrance. The longer the distance, and the greater the number of clothes, etc., encountered, the less the penetrating power. Close discharge may be surmised from powder marks around the wound. Equal staining and clean cut, indicates that the bullet entered at right angles to the surface, Unequal staining and irregularity of the edges of the wound of entrance implies oblique entrance and possibly no penetration of the abdominal cavity. This last effect is even more strongly suggested when we have a "long abraded or bruised tract of surface leading up to the penetration." This last conclusion is urged by Greig Smith,† page 1081, in his work on abdominal surgery, and he adds in this connection that "the tortuous wound canal can rarely be followed by a probe without risk of the formation of false passages, and the evidence deduced from probing is always liable to misinterpretation," Dr. Senn, in a recent paper, also takes the same view as to the dangers and uselessness of probing such wounds.

Are there any other means by which we may ascertain the penetration or non-penetration of abdominal cavity? We cannot agree with Greig Smith who thinks evidence may be furnished by injecting hydrogen gas into the wound tract as advised by Senn. The idea being that if the peritoneal cavity is penetrated, the gas will pass on into the cavity and distend it. We repeat that we can only ascertain the extent of the wound by laying open the bullet tract to its terminus, and there seems to be little if any doubt as to the propriety of such a step in all instances.

Differential Diagnosis between Penetrating Wounds with and without Visceral Lesions.—Having ascertained by a careful dissection along the wound track that the peritoneal cavity has been penetrated, we are next called upon to ascertain the presence or absence of visceral lesions. This is a matter of greatest importance and the symptoms to be of value, must be manifested early. Can we make the differential diagnosis in any other way than by celiotomy and a thorough examination of the abdominal contents? Are we justified in all instances on finding a perforation of the abdomen and in the absence of symptoms of visceral lesion, in opening up the abdomen to examine its contents? We agree with a majority of surgeons in thinking an exploration called for in all cases because of the fact that we know of no symptom or chain of symptoms by which we can discover beyond all question, the extent of the intra-peritoneal injury.

Shock.—Does the presence or absence of shock indicate the presence or absence of visceral lesion? A simple contusion of the abdominal wall may be attended by profuse shock, while a penetrating wound with

†On page 1091 he writes: "I entirely fail to appreciate the force of the arguments so frequently urged against probing of the wound when a ball has passed, surely a probe may follow without much increase of danger. I should always probe the wound, using a very blunt instrument which cannot be insinuated into the inter-muscular spaces; and this probe I should leave in the track of the ball if its presence were of the slightest assistance in showing the line of injury. To lay open the tract is in most cases unnecessary."

multiple visceral wounds may exist with little or no appreciable shock. This is a clinical fact so well known that we need hardly mention it. The presence or absence of shock is in no way significant, but the behavior of shock in many instances is, we think, a guide of signal importance. We cannot illustrate our views upon this point better than by referring to the manifestations in a case recently seen, in which, we think, it was demonstrated that the time of the onset of shock, syncope, or collapse, (we use the terms synonimously) is a guide to be depended upon.

The wounded man, a station agent, after being shot, walked into his office, telegraphed to Richmond for assistance, and then walked several hundred yards to his boarding house. This history is only interesting in that it shows actions inconsistent with the existence of profound shock. The wound of entrance was in the epigastric region near the median line. A downward direction was inferred as the pistol was fired from the top of a coal-car while the wounded man was standing on the ground. When seen an hour after the injury, in spite of considerable suffering and fatigue incident to traveling to Richmond, there was no appreciable shock. His morale was good. His temperature was normal, his skin dry, and his pulse strong, slow and regular. He vomited once after being seen, but there was no blood in the vomited matter. About three hours were consumed in getting the patient to a hospital and in preparing patient, operating room, etc., for an aseptic celiotomy. In that time, in spite of the administration of strychnia, and morphia, hypodermically, and a saline solution and whiskey per rectum, the patient had progressively lapsed into a condition of collapse. Guided by the clinical picture thus presented, we were satisfied prior to an exploratory incision that there was penetration with visceral lesion and intra-abdominal bleeding. It was inferred that hemorrhage from a wounded intercostal artery or the internal mammary would have been evinced by significant external bleeding. A section of the wound track revealed penetration of the peritoneal cavity and celiotomy disclosed profuse bleeding to have occurred from perforation through the free border of the stomach near its cardiac extremity and also a perforation of the left lobe of the liver about an inch and a half from its free margin. Neither wound was bleeding at this time—shock, nature's beneficent hæmostatic, had come to the rescue. Several pints of blood mixed with fluid contents of the stomach were removed from the peritoneal cavity, the stomach wound sutured, the liver wound packed, and the patient made an uneventful recovery.

We recall another case of pistol wound with penetration of the abdomen and perforation of the liver, in which we were able to infer a visceral lesion by the time of the onset of shock. This man, a police officer, was shot while trying to make an arrest. Hardly conscious of being shot, he chased his assailant several hundred yards and then walked half a mile to his home. For an hour or more there was little shock. By the time we had moved him to a hospital and were prepared to do an aseptic operation (several hours) he was collapsed. In both of these cases, the wound of entrance was above the umbilicus and in both, we had to recall the fact that there is a much greater likelihood of no visceral lesion from a wound above the umbilicus. In both instances the bullet's course was from above downwards, perforating in one case, and lodging in the other near the crest of the ileum. By the absence of primary shock and the appearance in a few hours of profound shock, we were able to diagnose penetration with visceral lesion. Shock from a penetrating wound of the abdomen without visceral lesion if it occurs at all will be instantly manifested, reach its acme at once and pass away under appropriate treatment in the usual time. On the other hand, shock followed by reaction and renewed shock, points to shock of injury from which the patient reacts and this reaction is followed by shock of hemorrhage or that incident to extravasation of hollow visceral contents.

During the continuance of the shock of injury, bleeding is held in abeyance, with the passing off of the shock of trauma, reactionary hemorrhage ensues, and with it we have the shock of hemorrhage or acute anæmia. Hence in abdominal wounds shock with reaction and succeeding shock, points to intra-abdominal bleeding from visceral lesion. Delayed shock as illustrated in the cases we have reported, point significantly to intra-abdominal bleeding from small vessels, in this instance time is necessary for reactionary hemorrhage and sufficient bleeding from small vessels to induce renewed shock. A wound of a large vessel like the aorta, iliac, renal or hepatic, would be attended by immediate collapse and death. Of course the shock of hemorrhage may ensue so rapidly as to be merged into the shock of injury, but we think in a majority of instances, valuable information will be afforded, especially as regards wounds of the solid viscera, by the intelligent observation of the symptoms as they are manifested. Shock delayed for ten or twelve hours will

usually point to hollow visceral lesion with escape of contents and the advent of septic peritonitis.

Pain.—Observation and study have led us to attach but little significance to the presence or absence of pain as distinguishing between the different types of abdominal wounds. By a majority of writers, it is held that we may have perforation with multiple lesion and but little pain, while a wound limited to the abdominal wall may be very painful. In this connection, I must quote from one who has had an experience with fifty cases, I allude to Dr. W. S. Parker, of New Orleans. "Although," he says, "most writers tell us that pain is in no way characteristic of these cases, the most constant symptom that we have observed, has been pain referred to the umbilicus." He affirms that he has "never seen a casa of penetrating gunshot wound of the abdomen in which this symptom was absent." I recall the fact that Dr. Hunter McGuire, in a paper read before the American Medical Association, twenty-five years ago, spoke of the pain, as acute, colicy, resembling a green-apple bellyache. This paper was one of the pioneer papers in which early operative interference was urged.

Vomiting.—A majority of writers fail to find in the present or absence of vomiting blood a guide. Not infrequently when there is a wound of the stomach no blood is found in the vomited or syphoned contents of the stomach. In the case we have reported, although there was a perforation of the stomach and free hemorrhage into the peritoneal cavity, there was no blood in the stomach contents vomited in our presence. Stomach and intestinal contents pouring out into the peritoneal cavity is much more likely to carry the blood also into the peritoneal cavity. Protrusion of the mucosa into the wound also helps to block the entrance of blood into the lumen of the wounded viscus. In this connection, we may mention that Greig Smith says: "One of the most important symptoms is a feeling of nausea frequently accompanied with vomiting." We cannot agree with Mr. Smith when he says: "This is not common in false shock." We think both nausea and vomiting are equally common in traumatic and physical shock. Certainly vomiting, per se, is no guide and even the presence of blood in the vomited contents is not conclusive of penetration of the stomach, since not infrequently a simple contusion of the stomach wall may result in hemorrhage into the cavity of the stomach.

Blood in Feces.—We cannot wait for blood in the feces even if its presence was noted, we would not know that it did not come from a contusion of the intestinal tract and not necessarily a perforation. Air escaping from or diffused in the cellular tissues surrounding the wounded tract is no longer considered a guide as it may have found its way in through the wound of entrance or be gas from putrefactive changes.

The protrusion of viscera or their contents through the wounds is an exceptional occurrence, notably so in the case of the small jacketed bullets from high power guns.

Blood in the Urine, while strongly suggestive is not confirmative of a perforation of the genito-urinary tract. A perforation of the peritoneal wall of the bladder may be ascertained by drawing off the urine and then injecting a measured quantity of aseptic fluid into the empty bladder. If the bladder readily distends, and if in a short time as much of the fluid is withdrawn as was put into the bladder, the inference is strong that there is no perforation of the bladder. Filtered air may also be used to inflate the bladder. This evidence of course, does not preclude a possible lesion of the ureter or pelvis of the kidney.

Gastro-Intestinal Tract.—The most important intra-abdominal wounds to diagnose early, are those involving the gastro-intestinal tract. We have seen that shock, pain, vomiting, etc., do not furnish evidences at all conclusive. It is held that we may with almost certainty expect multiple bowel perforation if the abdominal cavity is penetrated below the umbilicus, while the outlook is better if the wound of entrance is above the umbilicus. We think such a wound as the former, without visceral lesion must be so rare, it is a pity it ever occurs as it inclines not a few to wait for urgent symptoms before resorting to operative interference.

Before considering the diagnostic means of perhaps the greatest importance, let us look at the probable evidence afforded by escape of intestinal gas into the peritoneal cavity and the inducing hepatic resonance in place of normal liver dullness. Theoretically, an escape of gas into the peritoneal cavity and the insinuation of this gas between the lower ribs and convex surface of the liver should furnish reliable information, but it depends upon a sufficient escape of gas, an absence of adhesions between the liver and parietal peritoneum of the chest wall and diagnostic acumen sufficient to detect the gas.

A majority of writers allude to this diagnostic means but few rely upon it. To be of service it must be manifested early, as intestinal paresis from sepsis will very

quickly cause distension of the intestines and efface livid dullness.

Senn's Hydrogen Gas Test.—Many years ago Dr. Senn brought to the attention of the profession this means of diagnosing perforation of the gastro-intestinal tract and its technique is well known. We do not think this diagnostic means has been as well accepted by the profession as it merits. A majority of writers do not write encouragingly about it. Dr. Senn, however, has never lost confidence in it as a means of diagnosing an intestinal perforation. He has upon every occasion urged its use. He thinks by this means we may avoid an exploratory incision, and evisceration for diagnostic purposes. The objection to the use of hydrogen gas or filtered air does not appear to me to be logical. It has been claimed that the gas is rarely available when needed, that the paraphernalia i. e. the rubber bag from which and by which we are to drive the gas or air into the intestines is not often conveniently at hand. This is not a fault of the method. If we can accomplish by means of rectal insufflation what Dr. Senn has accomplished, it is the duty of the surgeon to provide the needed apparatus. In sixteen cases of gunshot wound of the abdomen, Dr. Senn was able to find no lesion in two, and of course, no need for an exploratory incision. The objection to this practice so often urged, that distension of the bowels makes it more difficult to return them if a section is made, is not sufficient.

By rectal insufflation only can we ascertain without an exploratory incision that there is no bowel perforation. Exploratory incision and rectal insufflation are our only guides available soon enough to enable us to do preventive work. The task returning distended bowels is by no means a serious undertaking and if it can show no intestinal wound, no section and evisceration will, in the experience of Dr. Senn and Greig Smith, be necessary. For that matter, an opening in the bowel could be made to let the gas out. The surgeon does not fear the intestinal lesion, his fear is that he will not find them all. The mortality is due to not getting at the lesions early and in overlooking one or more. It has been held that leakage of the intestinal contents into the peritoneal cavity is ensured by distending the bowels. I do not believe that a wound of the small bowel will ever occur without leakage of its fluid contents. I think it a pity that the idea should ever be held that leakage may not occur, as it encourages a supposed conservatism almost inevitably fatal.

The mission of insufflating the intestines with gas or air is to ascertain prior to an exploratory incision, the existence of an intestinal lesion. If it will accomplish this, we are not excusable for not using it, because of the trouble, etc., incident to its use. Its second mission is to ascertain the location of the lesion after the abdomen has been opened and by this means avoid evisceration and handling. The second mission, it seems to me, to be of minor importance as compared to the first.

Solid Visceral Wounds.—Can we differentiate between wounds involving the solid viscera from wounds limited to hollow viscera? We do not think this possible with any degree of accuracy, nor do we deem it essential, as in a majority of instances of both classes of wounds, operative interferencec is indicated. We should recall that multiple wounds are the rule and that both solid and hollow visceral wounds commonly exist. The symptoms and dangers incident to solid visceral wounds are due to hemorrhage. Recalling the fact that the symptoms of hemorrhage (usually parenchymatous) are not manifested immediately and are progressive, we can sometimes quite accurately diagnose intra-abdominal bleeding, but there may also exist multiple hollow visceral perforations, without significant symptoms of perforation until the advent of septic peritonitis. Unless we can eliminate intestinal or visceral perforation by distending those organs we cannot eliminate perforation except by a celiotomy.

Blood in the Abdominal Cavity.—Dullness on percussion in the right and left colic regions—varying areas of dullness with changed position of the patient and fullness in the cul de sac, may afford evidence of abdominal bleeding. But in estimating such evidence we must eliminate distension of colon, etc., from fœcal matter, and we should further regard the fact that extensive bleeding must have occurred before its presence can be appreciated. Ideal surgery contemplates operative interference to prevent the disastrous consequences of profuse bleeding and acute anemia.

Briefly we would urge: 1. That an X-ray examination locating the bullet in the abdominal wall is the only contingent which warrants us in not laying open the tubular bullet tract down to the peritoneum to ascertain if the cavity has been penetrated. 2. That we are justified, if ever, in non-operative interference only in the event of Senn's hydrogen gas affording evidence that there is no hollow visceral lesion, and the absence of symptoms of hemorrhage leads us to suppose there is no solid visceral lesion. 3. That until our means of differential diagnosis is very markedly advanced

the safe and conservative course in all penetrating wounds of the abdomen is to open the abdomen early and do thorough and quick intra-abdominal work.

Caries of the Teeth and Disease of the Stomach.

By Dr. Charles D Aaron, Detroit, Mich., Lecturer on Dietetics in the Detroit College of Medicine, Detroit, Mich.

In order that we may treat this subject properly we must know just what is meant by caries of the teeth. Caries means literally rottenness and implies molecular disintegration of tissue. The etiology of caries was not thoroughly understood, until an account of the action of micro-organisms was presented by Leber and Rottenstein in 1867.* This account was remarkable when we remember that it was published before the great discoveries in bacteriology had been made. We know now that caries is absolutely dependent upon the presence and proliferation of micro-organisms. These organisms attack first the organic material and feed upon it. They then create an acid which removes the lime salt. There is, of course, a difference between caries and simple decalcification, though both are caused by acids. The difference is due to the presence or absence of micro-organisms. Repeated experiments have proven that caries can be produced artificially, but when germs are excluded, caries does not occur.

There are two stages in dental caries, the first is a partial decalcification, the second a stage of digestion and solution of tissue. The first stage consists in a partial decalcification of the tooth substance by acids. These acids are formed in the mouth by a process of fermentation. This fermentation is the result of the action of micro-organisms on the sugar taken into the mouth, either as such or as starch, this latter being converted into sugar by the ptyalin of the saliva. In the second stage, when such decalcification has occurred, the micro-organisms are able to penetrate the softened tissue where, feeding upon the sugar present in solution, they form fresh acid and proliferate freely; thus they destroy the matrix and cause complete disintegration of the tissue. The acid formed in this fermentative process appears in most cases to be lactic acid. Over twenty-two kinds of germs, concerned in caries, have been isolated. They appear as leptothrix, micrococci, diplococci and bacilli.

*Mugmery, Verhandlungen des X Internationalen Medicinischen Congresses, Aug. 1890.

We know that the empty stomach always contains germs. The stomach, therefore, cannot be regarded as a perfect sterilizer. It was believed that the main function of the hydrochloric acid did not lie in its capacity to digest albumen, but rather in its destructive effect on micro-organisms. Under normal condition, it is true, free hydrochloric acid does arrest fermentation up to a certain degree; then, again, it has been shown that hydrochloric acid does not completely destroy the germs that have reached the stomach, and it has also been shown that fungi and great fermentation can exist together in the same stomach, even if hydrochloric acid is present.

Patients with dental caries are never healthy. The environment is conducive to the production and maintainance of the bacteria, which induce putrefactive decomposition in animal matter. We are justified in deducing from these circumstances that unless the germs which are lodged in the stomach come directly from the air they may be traced back to the carious teeth. Some of the germs may become incorporated with the food which has been masticated, enter the stomach and find in it a medium for development, rapidly multiply there and become a source of trouble. The multiplication of the micro-organisms and of their products induce a hyperæmia and then a hypertrophic condition of the mucous membrane of the stomach, in which, instead of the normal secretion of gastric juice, there is a heavy, viscid, ropy mucus, which is tenacious and clings to the mucous membrane. This mucus fills the mouths of the glands and completely covers the mucous membrane, so that it almost entirely precludes the possibility of any thing like normal action. The food itself begins to act as an irritant because the juices are not able to penetrate into it; and the proteolytic process yields to fermentation and putrefaction. The bulk of undigested food overtaxes the muscle of the stomach by its weight and sets up gastric irritation.

Patients with caries always have bad habits of mastication; but mastication is an important factor in the production of stomach disease. Food that passes into the stomach before it is ground up, remains as a foreign body in it and is likely to irritate the gastric walls and supply a basis for the culture of micro-organisms, the toxin of which may become the cause of certain pathological conditions. Bacteria, which swarm in decayed teeth, pass with the food into the stomach and set up chronic gastritis. It must also be remembered that not all micro-organisms that excite inflammation are pyogenic, for the lactic acid micro-

organisms form a toxin that causes catarrhal inflammation. Germs which usually produce pus in interstitial tissue, do not produce pus when they develop on the mucous membrane, but may simply keep up chronic inflammation.

While many of the micro-organisms found in the mouth do not produce pus, they nevertheless induce inflammation as e. g. gingivitis marginalis. The same group of micro-organisms may be able to set up a chronic inflammatory process of the stomach. In gastritis these organisms grow in colonies upon the mucous walls of the stomach. Turck† reports a case of a man with all his molars decayed; in some parts of the mouth the gums had grown over the stumps and the mouth presented a very bad appearanee. Cultures were made from the mouth and the stomach. Many of the micro-organisms were found colonized in the stomach as well as in the mouth—the small and long rods, some thread—form bacilli and a great variety of micrococci, including streptococci, were found. Such cases may be seen in any of our clinics quite frequently. It is evident that an intimate relation exists between caries of the teeth and diseases of the stomach.

Starck‡ even maintains that there is frequent association between caries of the teeth and enlargement of the cervical lymphatic glands. Out of 113 children with enlarged glands examined, several had carious teeth. The glands involved were on the same side as the caries. Anterior glands were enlarged, if the incisors were carious, and the glands at the angle of the jaw were enlarged, if the molars were involved. It is questionable whether these cases are tubercular or not. But a carious tooth may be the seat of a primary tubercular focus. And he adds: "I would advise the placing of school children under the supervision of a competent dentist." Among the predisposing causes of caries is the rapid development of teeth, the deficiency of lime salt in the body, richitis, tuberculosis, and syphilis; defective structure, deep fissures and cavities in the enamel, imperfections in the dentine, irregular position of the teeth leading to the improper retention of food, and not the least important is the fact that certain diseases give rise to an acid reaction in the mouth. Despite the fact that the tooth has natural means for protection, it cannot always guard itself against caries. Frey§ maintains that almost all constitutional troubles produce an alteration of the salivary secretions. This may act directly on the teeth by an acidulous reaction, or more likely indirectly by constituting a favorable condition for the development of bacteria. The protective dentine can be affected by strong thermal or medicamental irritations.

The treatment of dental caries is purely operative: it consists in the thorough removal of the diseased tissue. The cavity is treated with an antiseptic, and material is inserted which shall thoroughly exclude germs. Such material is, because of its density and applicability to the walls of the cavity, the most effective cure for the disease, so far as our present knowledge goes.

In acute fevers the most scrupulous cleanliness of the mouth and teeth should be observed, because the salivary secretion under such conditions is of a small quantity only, and is not capable of even approximately neutralising the acids which are formed.

There is one caution which the conservative dentist cannot afford to ignore, the death of dental tissue is a constant menace to the whole process of digestion, and may be the source of much mischief to general health. It may, therefore, be assumed that dentistry may always join hands with general medicine to the benefit of the patient.

32 Adams Ave. W.

†Turck, New York Medical Journal, November 23, 1895.

‡Starck, Revue de la tuberculose, July, 1896.

§L. Frey, Des moyens de resistance de la dent contre la carie in "Gazette des Hopitaux," No. 39, April, 1893.

Twentieth Century Medico-Biologic Science.

By Joseph Clements, M. D., Kansas City, Mo.

We yield to no man our respect for, and appreciation of, the importance and grandeur of medical science. It vies for precedence with the noblest of the sciences, being magnificent in the scope of its field and nature, and unselfish and beneficent in its aims and efforts.

It has drawn to its ranks many of the brightest minds of the ages as they passed, and enrolled upon its scroll names, at once representative of the loftiest intellect, foremost culture and purest character. Its field of investigation and operation is myriad sourced, and the influences with which it is associated are fitted to develop the highest and best of human nature's possibilities.

To recount its achievements and to laud the glories of its progress would exhibit and gratify a pardonable pride. The closing decades of the passing century mark its most brilliant exploits and successes, and these, great as they are, but foreshadow larger progress and coming glory. To aid, if but in wee manner, this destined future, is the aim of this paper.

Medical science, or rather practice, doubtless began with the beginning of the race. 'Bruises" were made and had to be healed in the suburbs of the garden that enharbored the nucleus of the human family. Smarting under the bruises and ills incident to that beginning life, they surveyed their environment for means of relief.

Leaves.—Were not the "leaves for the healing of the nations? and mud poultices readily suggested their possibilities and were tried, and the healing followed. It was simple and very natural to suppose that the leaves and mud contained the healing virtue—thus began and was conceived one of the basic principles of the therapeutic art.

From these first accidents and incidents, occurring in the infancy of the world, may be traced, or at least supposed, the beginnings of that science we have extolled. The idea, not fully apprehended in all its bearings and consequences at the time, was this—that a curative power contained in the leaves and mud was conveyed to the wound, adding to the forces of nature within, and bringing about the healing. The solution of the continuity was restored by principles from without adding to those already operative within. As the race grew and increased, and environments changed, and they began to 'take cold', or on tilling the ground malarial fevers prevailed, the additional idea readily arose that forces from without entered and produced disease within.

Now we admit that the foregoing may be designated as mere fanciful speculation, but we leave that and come down to hard reason and fact. However or whenever the ideas we have expressed were conceived, they did arise, and have prevailed to the present, and very fairly express the accepted theory of medical pathology and therapeutics. Now this was an error easy to fall into in those primitive times, but of serious and far reaching consequences, but which is repudiated by the advanced medical thought of the day; and when the revision in progress shall be completed, and medical thought adjusted to the corrected operative plan, medical science shall then enter upon an era of progress and usefulness surpassing all hitherto optimistic expectations.

In pursuance of our purpose we predicate the statement that the fundamental principle in medical science, the question taking precedence of all others is: What is vital force? Anatomical structures, physiological activities, histologic elements, all originate here. What then is vital force? This problem is not solved, no satisfactory answer has been given, it is considered unsolvable by this generation. The immense proportions of this fact, in the calamitous results produced, have, until now, never been fully realized; and until this problem can be elucidated and explained we cannot hope to have a correct science of medicine, in those branches at least which are related to the vital force energies—the departments of pathology and therapeutics.

Groping then in the dark. largely, as we must necessarily be, with this foundation problem unsolved, the best possible under the circumstances has been done in building a scientific theory and practice, and almost infinitely better than would seem supposable. In thé absence of complete knowledge of vital force, as would be sure to be the case, crude, or at least fanciful speculative theories and methods of practice have obtained.

As we have said, in the departments of pathology and therapeutics, mainly, the errors we point out are operative. Medical science in these two departments is based upon, first, vital force activity, whatever that may be; second, active causes entering from without to produce disease; third, active forces or principles in drugs operating to cure disease. Now this fairly represents the teaching in college and text-book in these two departments of medical science. This then is the hypothesis—that life, including all its physiologic, pathologic and therapeutic functions are set in operation and controlled by these three sets of forces —one vital, two external and additional; in other words, nature—operative external causes of disease and active medical principles. This then is what we affirm to be the error out of which has grown, and because of which prevail, the groundless theories and speculations which make of medical science, so largely, a system of empiricism. And we believe that when this error shall have been exploited, and the problem of vital force rationally solved, and the doctrines of medical science adjusted to the true operative plan, then christian science, so-called, osteopathy, and hypnotism, etc., will yield up the possible grains of truth, the first two may have, and the latter without doubt really has, which will be incorporated in the true science — medico-biologic science — and fakes and frauds will disappear.

The plan suggested by a writer in the Journal of the American Medical Association, Sept., 1898, to "Suppress Quackery," may do some good; but it cannot other than fail, as would any other scheme, while it leaves the public deluded by the idea that forces from without, which can be manufactured and sold, or imparted for a fee,

may be made to enter and operate for the removal of ills real or supposed. Instead of legislation to prevent or control evils which grow entirely out of the delusion that is so wide spread, aim at the root and foundation of the evil by teaching the people that no operative force can be imparted to, or enter from without, to cure disease. Sow the truth broadcast, as Dr. Elmer Lee of New York, announced in his paper at Denver in June last on *appendicitis*, "the power to create, as well as to cure disease, resides in the body and never out of it." And as Dr. Lionel S. Beale, of London, puts it, "Every pathologic change is directly consequent upon vital action, and as Dr. S. Solis-Cohen, of Philadelphia, said years ago: "Disease and recovery are alike vital processes in which the organism itself is the active agent," and as Prof. D. R. Porter, of this city, said to the writer, "the idea of 'virtue' residing in drugs is the bane of therapeutics to-day;" and as Dr. Von Virchow, of Russia, says, "Pathology should be considered a part of biology," and as Dr. Durham of Keene, N. H., so fully elaborated in his paper on "A new Interpretation of Operative Principles;* and as hundreds of others are thinking who have not put it into words. This is what will form, "The Twentieth Century Medico-Biologic Science.

Teach the people this doctrine and the conviction will soon possess them that no one but a scientific physician is safe to be trusted with the direction and management of that wonderful and complicated vital force agency, on the intelligent and skillful guiding of which depends their safe conduct from disease to health. This is the way to suppress quackery. Teach the children in the public schools these first principles of medico-biologic science, and the present generation will see about the last of osteopathy, christian science, divine healing, with the frauds, *ad nauseam*.

Against the error that we have speculatively supposed to have had its inception in the dawn of the race, we place the doctrine grounding itself in the mind of the foremost, original thinking men of the profession, that there is but one force or principle operating within the human organism, or that can operate there, and that is vital force. Correctly and scientifically speaking there are no active causes of disease entering from without, and there are no active medical principles.

The body is formed of vital, living matter and formed matter—one-fifth of the former, four-fifths of the latter. The living matter takes up the nutrient material supplied from without and transforms it into living matter or protoplasm, out of which it weaves the various tissues of the body. The living protoplasmic substance is diffused throughout the entire organism, to the extent of at least one-fifth, and all of the activities of the entire body are operated by the protoplasm thus universal throughout. The nutrient material is dead matter which is taken up and vitalized and then made over into formed matter, out of which develop blood and bone and nerve and vessel and muscle and skin, etc; but life, motion, etc., all reside in, and are operated by the vital force energy inherent to the universal protoplasm; and, throughout the entire body and being, there is no force or operative power other than this.

This needs no argument—it is self-evident; to state the fact, proves it. We may illustrate it by the law of nature, that the higher dominates the lower. Dead matter does not operate on the living, though by coming into contact with it, it may occasion or "cause" the living to act. If in the use of the term "cause" we mean a power of operation issuing from and producing activity, like the force of the magnet drawing the objects to itself—setting them in motion—then there is no cause of disease or cure from outside the vital domain. But if by cause we mean simply that by contact relation—of a microbe, or miasma, for instance—a sensation arises which becomes the occasion of active operation of the vital force within, then there are "causes" for disease from without, and there may be causes from without of cure.

It would be idle to object that this is hair-splitting, and that these are distinctions without a difference. The distinctions involved are vital, and the differences are world-wide in the banefulness of the results accruing; for the lack of clearly defining these distinctions of thought has perpetuated the delusion that virtue residing in the leaves, and operative principles inherent to drugs, can be secured for a consideration, and will be effective in the cure of disease. It signifies little who dispenses the virtue to heal, if it can be prepared and sold and taken. This is the damning delusion.

Quackery and fraud flourish on this doctrine, and the educated, scientific physician has not the ghost of a chance in competition; his scientific equipment is his own undoing. If medicines are prescribed with the idea that they are to impart a force of operation not already possessed, it is a snare and a delusion. The advanced, thinking men do not prescribe drugs with any such idea.

*See the Journal of the American Medical Association, July 2, 1898.

Hundreds of men are administering "curative" agencies with these distinctions struggling in their minds for place and power. The coming century, early in its career will clarify and give these views and thoughts their proper place.

Twentieth century science will be medico-biologic science, or perhaps better still, bio-medical science—vital force understood and explained, the basis of it, and "practice" founded upon the solved problem. The scientific physician will be guided entirely by nature's methods and laws of operation, and in place of recognizing forces from without creating disease, and operative principles in drugs curing the same, he will have comprehended and mastered the doctrine taught by Stahl, two centuries ago, that the "anima," or "force," not only forms the body, but, recognizing diseased conditions within the vital domain, it at once proceeds to correct the same by the exercise of its own various parts.

Not recognizing the germ of future and correct therapeutic doctrine in these teachings, the term "mysticism" was used to characterize them, by those who were too short sighted to see the far-reaching significance of his ideas.

Twentieth century medico-biologic science will teach the rational sphere of drugs; a true use, a necessary use; for there will be no cure, in some diseases, without the appropriate medicinal agent. Yet it will be administered with the clear understanding that the contact relation of the medicine will be simply the occasion or "cause" of the appropriate vital activity of the vital force energies within, a power inherent to the organism and set into operation by the contact of the drug with the vital force reservoir.

The tune in an Edison machine is produced by the musical machinery constructed within. The contact of the nickel, dropped in the slot, is necessary to set the machinery in operation. The nickel does not play the tune, yet it is the "cause" of it, and necessary to it. Each man can carry the analogy of the illustration to his own use of the therapeutic principle.

We have thus essayed, though but in wee manner, to outline a part only—yet an important part—of the coming twentieth century—bio-medical science, a field that will well repay the labor of original thought.

Abortion.

By Hugh F. Lorimer, M. D., Fair Haven, O.

In the May number of your valuable Journal appears the article "A Plea for Conservatism in the Treatment of Abortion," by R. L. Payne, with the discussion of same. The value of all such papers to the practitioner is its practical application, and in the light of our individual work they become useful. In a practice of fifteen years my obstetrical work and experience in the treatment of abortion and miscarriages has not been in proportion to my other work. Experiences of men differ so much that years of practice are not always to be taken as the basis from which to give an opinion, a few difficult cases to wrestle with may so impress one with the valuable lessons attending them that they "soak in" to stay. One case well studied makes the second more plain, the third easier, and the differences arising gives the medical man experience. Any plain case is very easily mapped out in the text-books, but the variety afforded and the unlooked for, furnish a storehouse from which to draw on future occasions.

With an inherited degree of caution and a very meagre medical training, clinically, I have always kept "hands off" in obstetrical work; and being so fortunate as to be born into the profession about the time of the discussion of Listerism, imbibed the doctrine of cleanliness to some extent at least, so that in attendance of about 165 labors, and a proportionate number of miscarriages, whatever that may mean, have never had a case of sepsis up to the present case, have never lost a woman, and but one child, and that my own fault. A country practice furnishes a better class of subjects, and to this a great share of success should be credited. The only claim on my individual part is having not meddled and keeping clean hands as far as possible.

I had two difficult cases of miscarriage in the last week. The last one I departed from both the lessons experience had taught me and the teaching of the above paper, and as a result I am now trying to atone for my sin.

On August 3d, at 9 P. M., was called to see Mrs. S., who was wasting and having great pain. This call was in the absence of her own regular physician. She gave the history of having wasted some for two weeks; for two days had some pain, had been seen in the morning by her own physician, who had evidently tamponed the uterus. When I found her, the hemorrhage was quite profuse, pain very great. Basing my conclusions on the above symptoms and with what I thought to be the anticipations of my medical friend, I proposed to at once empty the uterus. This was the first time I ever had the (mis)-fortune to get a finger inside the external os in these cases. My

reception was warm enough, but at the expense of the patient's circulation. Now already I had done evil that good might come, so I proceeded to empty the uterus, instead of getting the fœtus, which was about 4 months old, whole I took it away in parts, kept on until I got part of the placenta, tamponed the vagina, waited two hours and got some more placental tissue. In brief that case went along poorly for ten days, at which time the temperature arose to 100 degrees and pain set in. With the assistance of her former physician we did a curettement. I can now appreciate Dr. Payne's paper; while I believe the curette has its place, so far as I am concerned will make no more places for it.

Malarial Affections.

By William S. Stoakley, Millsboro Springs, Virginia.

No class of diseases which we encounter are of more interest than those which caption these remarks. The old physicians knew the remedies and applied them effectually, but they were entirely in the dark as to what the subtle poison was, or how it acted in giving rise to the prominent symptoms, because of lack of microscopes of sufficient power to disclose the intricacies of atomic morphology, such as Mr. Pasteur repeatedly confirmed, as in the power of imponderables for shaping matter, and the different results of variable atomic shapes as well.

Recent micro-transpiercings of nature's secrets serve to lift us out of the old ruts of specific medication by disclosing the wonderful controlling power of the imponderable sources, for both health and disease.

Such knowledge is calculated to heighten the appreciation of preventive medicine in avoiding the treatment of toxic results, by interdicting their concoction under aseptic laws which are of high antiquity.

Every day we note the force of habit as entirely too strong to be overcome by the material remedial agency of drugs; and medical advance along the lines of prevention through better habits must ere long carry the day or the health standard will be shockingly lowered on account of the nonchalant following of fashion, with a rapidly increasing infatuation for extremes in all directions, without regard to the tax upon the conservative energies of nature.

The ability to prevent diseases never was so plainly shown as of late, and among them none are more easily prevented than malarial affections in civil life.

Whilst no one can reasonably doubt that these diseases are caused by the vegetable organism termed by Laveran *plasmodium malariæ*, yet, we all know that this subtle element is itself caused by peculiar thermometric, hygrometric, barometric and electric conditions during vegetable decomposition, and that the results of these conditions can be in a great measure neutralized or overcome by perfect drainage; thorough cleanliness by use of lime in whitewashing every outbuilding, inside and out, and all the fences round the yard, and by scattering the same under the buildings that are not underpinned flush, in the cellars and round about the back premises, pig pens, fowl houses, and every foul place in the rear—taking for granted that the front is pretty and clean; but the grass on the lawn can be beautified by occasional sprinkling with lime, and the air purified at same time.

By cutting down the weeds immediately around the house, and burning them, both mosquitoes and malaria may be measurably avoided. Malaria apparently can be reckoned by these pests. When there are few mosquitoes there is little malaria, but where they are overwhelmingly abundant these affections are apt to prevail extensively—such is my observation.

The water arrangements for the family, of course, are clean and pure; but that is not sufficient; the water the cows drink should also be pure and clean, or the milk will be a "relay" for the seeds of disease brought from filthy surroundings miles away, and may not be altogether innocent of the charges sometimes made against ice cream. Though the ice from dirty ponds so often escapes suspicion, it, too, may oftentimes be suspected in the matter of causing disease.

Our object is to find the chain of circumstances originative of these diseases, with the stronger intent of preventing the cause than treating the results. Thus the pith of the science of preventive medicine is placed before the people in a comprehensible, plain, straight-forward way, for every day utilization in their line, and under one of their old rules, "A penny saved is a penny made."

With all due deference to those who think differently, before undertaking to teach the public medicine (other than the art of hygiene) by encouraging the reading of medical literature, the safest and best plan would be to have a majority of the profession express their judgment, for he of the humblest little hamlet has the right of opinion to say whether or not the popular imaginary pathologic vision would "strain" a point beyond the present "stretch," where

so many imagine they have every disease they read about; whether or not there would be a popular 'war of opinion' along medical lines after the fashion of the present political one (the people believing in the right of opinion, having posted themselves through reading medical literature); whether or not they would quietly follow their own ideas on medical points, and add to the prevailing endemic of neurasthenia, and many more die of "heart failure," etc. than now; and whether or not total "ignorance is bliss" where partial knowledgd is supposed to have begotten so many quacks.

This is truly an era in medicine where, though not in manner depreciative of drugs, it is striving to prevent the necessity of them. To do this requires an appeal to—what seems an uncommon gift, now-a-days, viz: Keen eyes to see the necessity of obedience to nature's suggestions, and balanced nerves to follow them, against all "artful contrivances" in opposition thereto.

Notwithstanding all efforts to "down" these affections there are sections where they will prevail; and we are called upon to treat them with drugs.

Among the latter quinine occupies a unique place—unique because no old drug appears to have caused such an entanglement of opinion in respect to remedial capabilities, to the extent of making it doubtful whether it has more enemies or friends.

Some friends of this drug persist in calling it out of its name, and thus attach to it powers which were never in it, and what Mr. Pasteur proved was an impossibility for matter under the forces, heat, light and electricity, viz: specification as to behavior.

If those who decry quinine in these affections will utilize the excretory, persuasive powers of ipecac, Dover's powder, combined with a touch of the eutrophic effects of calomel, in minute doses, every four hours, along with hot pediluviæ and general massage (accentuating the spinal rub) once a day for a few days, until the skin and kidneys know themselves, and the liver arouses from its lethargy; they will see the persistent thermic obstinacy and dry skin yield with grateful perspirative acknowledgment, and a copious flow of urine will attest the same by a "grunt" of satisfaction from the patient; meantime the bowels will have been moved pleasantly.

Just now the way is open for quinine combined with ipecac and given t. i. d. for a few days; then followed with five or six drops of dilute nitro-muriatic acid in a wine glass of water taken t. i. d. for a week, the case will go over to another inoculation; and if the skin, kidneys and liver are kept in normal condition a fresh attack will be a rarity.

Many years ago physicians handled this drug as harshly as now, by comment, because it would have its way; but they knew what it would do, and the time it would do it; well did they know too the cunning curative power of ipecac combined with it, as well as the wonderful eutrophic possibilities of calomel in many diseases, but they had to face then, just what we have in "the eternal fitness of things"; the cases have all to be individualized, and treated accordingly.

When the broken down red corpuscles of the blood show in the urine and petechial spots appear amidst a general yellow hue of the skin, likewise when gastro-intestinal symptoms indicate irritation or inflammation, quinine is absolutely harmful, for the fever is symptomatic and not essential.

There is something more to do in these acute symptomatic cases, as also in anæmic ones, where the latter show disorganized blood, than neutralize toxic organisma, for these have already done their work; healthful tissue must be made through renewed activity of the cells from re-vitalized blood, which, tho' making the protoplasm, yet it is the latter which has the commanding force to make the condition which comes about as new life by alterative remedies; and qui nine is not one of them, until later on when it may come in for toning and protecting this new life.

In miasmatic districts in cases demanding some antiperiodic where quinine could not be given the old doctors selected from the following list: Donovan's Solution (mercury iodine and arsenic); Iodine and tinct. ferri chlor.; Lugol's Solution; tincture black pepper; spirits of turpentine; willow bark tea with spts. frumenti added; serpentaria; nitro muriatic acid with ext. of taraxacum; Fowlers solution; pure corn meal, tablespoonful in a glass of water every few hours during the intervals of fever. When there is gastro-intestinal irritation this is no bad remedy.

In very obstinate cases when ordinary remedies failed, a combination of Fowler's solution, tinc. ferri chlor. and quinine would do the work effectually.

Healthful protoplasmic force coming from, no matter whither, we cannot help thinking must be the chief factor for immunity in these affections; nor can we refuse to credit to it superlative powers in all immune directions.

Can it be this and nothing more that is transmitted in the name of immunity, if it be true that a dynamic vital energy must

recover only through renewed action; and, in default of which, must ere long perish?

I have seen, at autopsies, during the civil war, on the Southern rivers, cases of pernicious anemic malaria, where the blood was so disorganized that "coffee grounds stuff" was found in the stomach after death; and the liver so rotten that a piece of it would tear loose from the fingers in attempting to hold it up, the urine during life showing the same disorganized resultants. These cases had every appearance of yellow fever but they were dengue and not yellow Jack proper. I am fully persuaded that only protracted experience in these affections will enable one to differentiate with any degree of accuracy.

A few years ago while quarantine officer at Old Point, a Russian ship came in the capes of Virginia under a yellow flag; the whole crew, including the Captain, had fever contracted in Mobile bay, with every appearance of yellow fever. Six of the crew were treated at Fisherman's Island, Virginia, and they all recovered. "Too many" recoveries from these southern fevers do not indicate yellow fever.

Not doubting a fall of the editor's gavel here, neither unmindful of the reader's patience—if he be in evidence—I close by repeating: We do not encounter more interesting diseases than malarial affections when we take them "all in all."

Typhoid Fever in Porto Rico.

By Paul C. Hutton, M. D., A. A. Surgeon U. S. A., Fifth U. S. Artillery, Ponce, Porto Rico.

Typhoid, not malaria! That is what we have to encounter on this Island. The army surgeons, almost as a whole, now recognize this fact and admit it, though some do so with reluctance.

Before my arrival I had almost made up my mind that we were to be confronted by an unlimited amount of malaria, and that quinine would serve as the great eradicator of disease.

I confess to have partly based this opinion upon certain statements made by newspapers with reference to boggy lands and various miasms said to be characteristic of the West Indies.

The first few cases which appeared were of doubtful character, but I was a little inclined to think them due to the plasmodium malariæ, and consequently they were treated as such.

This treatment, however, was an utter failure, and their subsequent development and ultimate termination, caused me to abandon both theories and treatment of malaria, and I desire to assert right here that we are not dealing with malaria in this country, but instead, we have typhoid fever, which sometimes does, and sometimes does not, conform to the disease as it is in the States. In all the cases taken to the general hospital in Ponce, an enormous amount of them were typhoid, and of over three hundred now confined to that hospital, only one malarial organism has been found and this was shown to me on the 20th of September, 1898, by Dr. Leary, the microscopist of that institution.

I do not know where this man came from, but I will venture to assert that he has recently come to this country, and that he brought his malaria with him. It has only been a few days since a man reported to me whom I was reasonably sure had remittent fever. The first I saw of him was when he reported at my tent with a temperature of 106 deg. F., at noon. Upon inquiry I found that he had not been sick beyond a slight headache and pain in his back until the day he reported, when he had a slight chill at 8 A. M., and appeared at 1.15 P. M. with a temperature of 106 deg. F. By an ice bath at once, his temperature was brought down to 104.4 deg., and by frequent baths during the afternoon his fever dropped to 102.2 deg., and this case I at once decided was of malarial origin. At 9 A. M., the following day, his temperature was 103.4, and I sent him to the general hospital with a diagnosis of probable malaria (?) To-day (Sept. 20th) I was informed that his microscopical examination proved negative under the examination for the plasmodium, and positive under the examination for the typhoid bacillus. It is just that I should further state that this case is the only one which I have known to develop in this way, though I have known many to develop rapidly; rapidly, as compared to the typical disease in our country.

I find that the ordinary soldier will report at sick call just two days before his admittance into the field hospital, and that the first complaint will refer to his head and the next to his back or epigastrum, and upon inquiry it usually develops that the patient has eaten absolutely nothing for two days before reporting sick. The native physicians call this disease typho (from teefoa), and it is known to some under the name of climatic fever, but whatever they may term it, if upon the post mortem table we find inflammation and ulceration of Peyer's patches, and, indeed, perforation, we Americans can only call it typhoid.

Major Arthur Snowden, Chief Surgeon of Gen. Henry's brigade, on the 19th of

September, related a case to me of a soldier in the second Wisconsin regiment who was taken suddenly ill, and died in 48 hours. This man had not reported sick before this time, and yet the post mortem revealed to him ulceration and perforation of the Peyer's patches, and the perforation he claims to be of enormous size. Now this man had been walking around, even doing his military duties with his intestines in this pathological state and with these bacilli preying upon his vital, but the most significant fact is that this individual was contaminating the entire camp and community by defecations, which he most indiscreetly deposited on the surface of the soil; an act which terminated with great hygienic disaster. Beside poisoning the water supply, which this and other similar cases undoubtedly did, two other methods of propagation have become prominent.

Countless numbers of flies swarmed about this excrement, and the kitchen also is a favorite place for these insects to congregate. Certainly they went from articles of died to excrement, and from excrement to articles of diet, loaded, laden with Eberth's bacilli. Again, this fæcal matter soon dried under the rays of a tropical sun, and these bacilli were then wafted by the breezes from place to place, and the men being only separated from the ground by an inch board and a blanket, the bacilli had no difficulty in obtaining an entrance. The officers of the second Wisconsin seemed to have difficulty in impressing upon their men the necessities of hygienic surrounding, for my own observations have shown me that with them surface defecation was the rule and not the exception.

If the water was poisoned, or if the foregoing facts with reference to the general dissemination of the germ by flies, heat and wind are true, then we are indebted to this individual and to this regiment for the liberal supply of fever we now have. By some it might be asked: "But how can these things be avoided by any army in the field?" By simply doing as other regiments do, which is to dig a sink six to eight feet deep a good distance in rear of camp, which is used exclusively. Each soldier covers his own deposits with soil immediately, and, in addition to this, a layer of lime is added at least twice a day. The men are instructed to drink only boiled water, and no other is supplied them, and I am reasonably sure that had these restrictions been made by all the troops who first landed, we would have had less typhoid among us now.

One thing is to be mentioned about relapses which occur with distressing frequency, but from which they usually recover. The mortality from relapses is remarkably low, and I do not consider the mortality of the fever itself very high, for an American in the West Indies suffering from fever, is greatly handicapped by the climate, and a mortality of 6½ per cent. is not discouraging.

Permit me to say that the few newspapers which I have seen since coming to this country mention accounts of suffering and deprivation of which I know nothing, My opinion is that they are partly exaggerated, but mostly untrue, for I cannot conceive that the much abused medical department of the army could have so many short-comings at one place and yield so readily to all requests at another. To my own knowledge every request which the Chief Surgeon has cabled from this Island has been promptly granted. Drugs, hospital equipments, surgeons and nurses, male and female, have been forthcoming, and if suffering has occurred for want of these articles, it has been elsewhere than Ponce and surrounding country.

The delicacies not provided by the medical department have been presented by the two great relief institutions of our country, and I cannot speak too highly of the accomplishments of Dr. G. G. Groff of the National Relief, and Major H. F. Barnes of the Red Cross, both of whom have contributed much toward the comfort of the sick and wounded.

In conclusion, I will mention the utter failure of these fevers to respond to quinine, and I have to condemn it most heartily. Iron and arsenic, and even Warburg's tincture, have not found favor in my hands, and we are now depending entirely upon the cold baths and milk diet, with an occasional antiseptic.

A Case of Aortic Regurgitation.

By H. Foster Haylett, M. D., Pueblo, Colo.

The following case is reported because of the extremely grave conditions existing when the case was first seen, and the usefulness of digitalis in overcoming the lack of compensation, lessening hypertrophy and dilatation, to the end that patient was enabled to lead a fairly active life for many months.

The history of the case is as follows:

C. A., male, Mexican, wood contractor, aged 30 years; height 6 feet 2 inches, and weight 176 pounds. Had used tobacco moderately for most of his life, and was given to excesses in alcoholics and venery, but denied specific disease. Was born and

"Typho-Malarial" Fever

It is now satisfactorily determined that double infection with the typhoid bacillus and the malarial plasmodium is possible. The great majority of cases, however, of so-called "**Typho-Malarial" Fever** are not of this class, but result from infection by the æstivo-autumnal malarial parasite, which produces symptoms closely approximating those of typhoid fever.

This form of malaria is usually resistant to Quinine, Warburg's Tincture and other antiperiodics. If not recognized in time, the characteristic malarial cachexia caused by the destruction of the red blood corpuscles, and the invasion of the spleen and spiral marrow by the parasites, is certain to supervene. Even at this stage "Typho-Malaria" is readily relieved by treatment with

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in pill form. **Guaiaquin** destroys the æstivo-autumnal parasites, relieves and, when given early, prevents the onset of malarial cachexia which is so debilitating to the patient. Its benefits are diagnostic as well as remedial, since its administration enables the practitioner to differentiate betwen the æstivo-autumnal and typhoid fevers.

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It is the most economical, as it is the least expensive.

The tube holds about 2 ozs. and costs 25 cents. From the numerous letters of commendations we have already received from the profession we feel sure that the friends and users of Unguentine are pleased with this new container.

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always lived near Peublo—altitude only 4734 feet. Had inflammatory rheumatism and scarlet fever when twelve years old, since which time he has been short of breath upon extra exertion. For the past three or four years he has noticed pulsations on both sides of his neck, increasing dyspnœa, and palpitation.

I first saw him February 7th, 1897, one day after he had been given up to die by two physicians; and indeed I had little hope of his being up and about again The heart-action was labored and pulsations were sixty. The pulse was of the characteristic "water-hammer," "splashing" variety, being more apparent when the arm was raised. Both the fingers and toes were markedly clubbed. An examination of the chest revealed a feeble and diffused beat, the apex pulsation showing as low down as the seventh interspace, and two inches to the left of the nipple line. Cardiac dullness extended $5\frac{1}{2}$ inches from right to left, and from the third rib to line of liver-dullness.

The regurgitant murmur was diastolic and was heard best at third interspace to the right of sternum. A "boom" sound was also heard at apex, showing over-strain of left ventricle; but no mitral lesion was detected, nor was the sound at this locality transmitted toward the axilla.

The patient exhibited much mental anxiety and forebodings of impending death. Orthopnœa was intense; angina pectoris existed at frequent intervals; and attacks of syncope made the case quite distressing to patient and friends alike, and tended to confirm the prognosis already pronounced.

The patient was immediately put upon ten drop doses of tincture digitalis, combined with nux vomica and belladonna, and the liver functions stimulated. Although the heart's action remained slow the compensation which had been lost soon showed signs of a return. In ten days the digitalis was reduced to a tonic dose, given three times dally and continued until patient succumbed to the organic lesion. On February 22d the apex beat was at the sixth interspace, the horizontal hypertrophy was correspondingly reduced and patient was able to walk about. From this time until September 29th he attended to his usual duties in a fairly satisfactory and comfortable manner. On the above date he was admitted to a hospital where he remained ten days and was treated for an increased albuminuria, aggravated by over exertion. Albumin was not a constant ingredient to be found in his urine, but at times was present in a marked degree. After leaving the hospital he again went about his business, and hoping to be able to do him some good with strophanthus I prescribed it, but found it much inferior to the digitalis in preserving that equilibrium so necessary to a crippled heart, such as this man possessed.

On the morning of November 8th, 1897, patient was found dead in his bed, dissolution having evidently occurred; but unfortunately a post mortem examination was denied in a case where it could have served most advantageously to our knowledge.

In summarizing I feel justified in expressing the opinion that digitalis, in tonic doses, served to take the place of a hypertrophy that had ceased to compensate for an aortic reflex of high degree, and thus, a patient, apparently dying, was restored to fair activity, and permitted to live nine months longer.

Sciatica.

Dr. Negro, of Turin, has succeeded in curing 100 out of 113 cases of sciatica by digital pressure over the painful part. His method is as follows: The patient assumes ventro-decubitus with extremities well extended and adducted. This secures relaxation of the muscles around the canal from which the sciatic nerve emerges and facilitates locating exactly the seat of the pain. On the painful spot the end phalanx of the right thumb is super-imposed, and aided by that of left thumb is pressed firmly and with all possible force for fifteen or twenty seconds, and pressure is repeated for some length of time after an interval of a few minutes. The patient is then usually able to walk, and at times is free from pain. The entire procedure is repeated in two days. In the majority of cases six treatments are sufficient.

Dr. I. N. Love, in reply to a toast "*The Babies*," at a recent banquet in St. Louis, closed an eloquent speech with the sentiment: "Then here's to us all, babies as we are. Yes, we come into this world, puling, puking infants, naked and bare; we go through the world, puling, and puking infants, each with his own share of sorrow, trouble and care. We go out of the world, puling, whimpering, helpless infants, faint, feeble, tottering, God in his infinite omnipotent wisdom only knows where; but all along the road, if we are thoroughbreds here, we shall be thoroughbreds in that Eternal future towards which we are all speeding with irresistible force."

Dr. Oliver W. Holmes used to say of the study of pathological anatomy, that it is a good deal like the study of the fireworks after the Fourth of July.

THE

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SUBSCRIPTION. $2-50 PER YEAR,

THE USE OF THE TITLE DR. BY OPTICIANS AND OTHERS.

Some two years ago an individual opened an office, in a Massachusetts town, on whose door and about the entrance of which were conspicuously displayed signs, bearing this legend, "Dr. George W. Bradley, Eye Specialist." He also circulated cards, bearing the same inscription, and embodied this abbreviated title in his newspaper advertisements. It developed that he was not doctor of medicine, but was simply a layman graduate of an "optical college," and for this reason claimed to be a "doctor of refraction," whatever that may mean, and so entitled to the use of the term. This wrongful use of our title evidently deceived for a time sufficient of the unwary to finally get him in trouble. As there is a statute in that State against the use of the title "Doctor," meaning a doctor of medicine, without being veritably such, the optician was sentenced by the district court to pay a fine of $200.

From this sentence he appealed, and while his council conceded that his client was not a practicing physician, and was not registered as such in the commonwealth, he argued that the statute in question was unconstitutional and that the facts in the Bradley case were not intended by the legislature to be prohibited. This contention was so artfully argued by the council of the defendant that his motion was actually sustained by the presiding judge (Gaskell) and defendant discharged.

It is indeed unfortunate that this case was not taken to the U. S. Supreme Court, as the ruling certainly appears unjust, both to the community at large and to the properly qualified physician. Surely if the layman has no other way to find out who is, or who is not a properly qualified physician except he examine the records of the county or State, a thing manifestly impossible with many, then surely there must be some egregious fault in our constitution, and our lawmakers should at once take the necessary steps to see that it is amended.

This, our just, and generally well earned title, has been so much abused of late years and we have grown so accustomed to hearing it wrongfully used and applied, without a word of protest on our part, that it is about time the profession should wake up to a proper sense of realization as to its importance and defend it from improper use at all times and places. How else should the layman know who is and who is not a properly educated physician? True, it usually acts as a boomerang in the long run to those assuming it unworthily, but why let them deceive the public at all? A wolf in sheep's clothing, verily!

If it is unconstitutional to prohibit the use of a title used to distinguish a person skilled in the art of healing from one who has not such knowledge, then in the name of common sense why is it constitutional to prohibit a man from masquerading on the street in the garb and dress of a woman or a woman in that of a man? In either case harm may be done some of the community, and is usually assumed for the express purpose of deception, and injures both those deceived and the party falsely represented.

To the use of the title simply as an ornament to the name of men of letters and science, such as the graduates in law and theology, no one has the slightest objection. Horse doctors and dentists do not often, if ever essay the role of our calling, consequently deceives no one, and we need not trouble ourselves if they are sometimes referred to by this term. But when any one pretending to skill in any other branch of the healing art, whether it be prescribing medicine, glasses, trusses, faith, hypnotism, "christian science," "osteopathy," or any other "pathy" or device for the alleviation or cure of human suffering, such as practising surgery, massage, hygiene, etc., when any of these, we say, are not legally qualified physicians, and assume this title, we should at once resent it as a personal offense and source of public danger and treat them accordingly. Let us remember that the title means something, means our standing as a profession and as individuals. The public judges us as a whole by those using this title, whether lawfully or not, and we as a whole are regarded as this average appears to each individual. Who of us but does not witness almost daily, or at least weekly the righteous disgust some people have for us in general, on account of their experience with these self-styled "doctors."

Nearly every State has rightly enacted

laws calculated to protect the community from unqualified pretenders, but it is well known how poor a law is if not practical. Now can they be practical if our identity is lost without some exclusive title to distinguish us by? We have already by our apathy allowed the encroachment on our title and privileges by the legalizing of various "pathies" even to the audacious effrontery of the latest "Doctor of Osteopathy"; for it may seem startling, but none the less true that "osteopathy" has been legalised in several States and hence those practising it are allowed the privileges and immunities of the medical profession, much to our chagrin and their exultation.

A PLEA FOR ORTHOPEDICS.

Our medical forefathers have left to us a goodly heritage. The spirit of anxious unrest and toilsome inquiry into hidden truths in science dominated them even with more relentless force than it now besets the student, because immature art had but crude apparatus in her workshop. This spirit has become ours and the monuments, scarce well begun, lie before us for further shaping.

Were Hunter, Paré, Sydenham and Jenner, men of their times? Yes! even more! They were in advance of their color-bearers and heralded the advance of armed truths that were to shake the foundations of early knowledge more ruthlessly than did the Turks the Eastern capitol.

These men were full, ripe scholars, it is true, but each went a step beyond and made one special effort to enrich posterity. It was not enough to merely be the equals of their fellow men.

Would you to-day learn about male hysteria? Take down your Sydenham. Was pneumonia believed to be infectious? Ask Boerhaave, of Leyden, and his pupil Huxham. Was morbus coxæ rightly understood? Read John Hilton's delightful classics on "Rest and Pain." The incomparable Holmes tells us if we would learn of diseases of the spine to go to Pott—Sir Perceval Pott. And thus, then, we have come to know that the best results have reached us through labors in, not many fields, but one. Time has not thinned the ranks of our profession. Each of the rank and file who enlists finds there is more and yet more to be done, more tactics to master, more forced marches to do. Is it reasonable to believe that each, even though he keep well abreast, will surpass in every scene of action? Not so. The best works are done by those who, with a sound understanding, devote their well stocked stores of mind toward the one chosen object in view. Such a man is called, and rightly, a specialist. Yet do not understand me to say that every man should early specialize. This would mean degeneration. Witness the young graduate as he vaults lightly, from his college bench into an office chair, where he poses as a specialist in this and that. But I *do* say that after a period of preparation in practice, I mean full, active, toilsome practice, a man owes it to his people, his times and to himself to devote his energies toward some definite, particular work, for which he is fitted, and in which he can be a decoration to his profession.

The rights of specialism to existence are defended by the incontestable fact of its power to do the best work.

Has Kentucky less honor because she produced the intrepid laparotomist? (McDowell). Do not Alabama and New York vie with each other to do honor to the name of Sims? Does not the barren upper peninsula of Michigan now rejoice that she once held O'Dwyer? He walked out of Houghton on snow-shoes to return to a larger field of labor because his great soul was oppressed by the lack of incentives for work and the sorry failure of appreciation.

A quarter of a century has carefully melted the dross and shown us the good works of specialists in this country. Diseases of the mind and nervous system, pediatrics and gynæcology have been put upon a reputable and lasting basis, and have earned for their workmen the wholesome fruits of toil. Yet some will say that men who teach these branches are actuated by selfish motives entirely. Is it possible that Smith, Rotch, and the lamented O'Dwyer, have labored for themselves alone? Did Sims operate seventeen times on one woman alone for glory? Was his joy, when he saw that the fistula was forever closed, less than that of lovable and pious old Doctor McClure, in the gray light of the early morning? Did he patiently teach in foreign cities for his own aggrandizement? Do the names of Gray, Dana, Charcot and Herdman suggest selfish ends? I think not.

Surgery has felt the healthful division of its vastness. Gross in his most self-sufficient moments was wont to deplore the endless diversity of his labors.

Should the man who to-day holds the enviable position of a teacher of the principles and practice of surgery feel ill at ease because abdominal, gynæcological and orthopedic surgery have been divided among his equals for benefit mutual to man and subject? Surely a teacher must be ill at ease who to-day expects to thoroughly prepare his pupils in surgery without this healthy collaboration.

Thirty years ago in New York city the first positive advance in the treatment of deformities was made when the Orthopedic Hospital and Dispensary was erected. With this enterprise will forever be associated the illustrious name of Henry G. Davis. He gave his heart and life to the work, yet left it unfinished, with the knowledge, however, dear to think upon, "*non omnis morior.*" Since his day each school of medicine has seen the necessity for teachers in orthopedic surgery, and the names of Sayre, Phelps, Barton and Schaffer, and others, have been cast indellibly into the structure.

What each school of medicine in the land needs is a chair of orthopedic surgery. Is the subject of less importance, then, than abdominal or genito-urinary surgery? Faulty nature, and too often, alas! faulty surgeons, have left their stamp on mortals without stint, and must these poor be also constantly with us as a reminder of what might be done?

Our sister institutions have set foot in the right direction. We can do no harm in following them. Their example is too fruitful in good to appear for naught, and their teachers have shown by their clinical achievements that deformities hitherto thought to be irreparable were indeed possible of cure.

When we see a young woman rocking through life on her congenitally dislocated hips, do we not grieve? Dupuytren taught that this deformity was without remedy, and Hippocrates, Galen and Paré said so before him; but have not Hoffa and Lorenz shown that it can be cured?

The labors of these illustrious men who have in our time upheld the standard of orthopedics have been carried on in perfect and tuneful harmony with those of others in neighboring fields—all tending toward the common weal.

Were it in our power to-day to effect exchange of thoughts with workers a century agone, we might well say: The names of Paré, Pott, Cooper and Hilton, are as much ours as they are yours; and the names of Sayre, Phelps, Davis and O'Dwyer are as much yours as they are ours.

PUERPERAL SEPSIS.

That the occurrence of puerperal sepsis is much more common, in private practice, than the advance in aseptic midwifery should warrant, is indubitable. The statistics of maternity hospitals, that formerly were frightful, have been reduced to a minimum—reduced by attention to aseptic details. Parturition in the home, in private practice was far safer than in the hospital. The tables have been reversed.

Septic cases do not occur in the hands of competent men as frequently as formerly, but no one can dispute the fact that they occur at the present time with only too great frequency. Private practitioners must first and foremost recognize this fact, and they must have it borne into their consciences that they are directly responsible for it. The sooner this is generally accepted, the better for the reputation of the profession. Surgical cleanliness has been demonstrated as the sole requisite to the best results—cleanliness of hands, of external genitals, of the immediate surroundings, as bed and covering—cleanliness of external genitals for days subsequent to labor.

Mere immersion of superficially washed hands in antiseptic solution will not give an aseptic hand nor a near approach to it. Mechanical scrubbing with soap and water is a necessary preliminary. The external genitals of the parturient must be rendered surgically clean so as not to infect the examining finger. The clothing and bedding of the woman must be clean, where it comes in contact. This last point involves the education of the laity to the paramount importance of surgical cleanliness in the conduct of labor cases. No surgeon could expect to obtain aseptic wounds if he operated on dirty beds or under bed covering. Neither can ideal results be obtained in obstetrics as long as examinations are made under bed coverings and without due exposure. Who that has practiced medicine many years but can recall the old obstetrician getting up on the bed to apply the forceps under cover!

No one would think of operating on a lacerated perineum without due exposure, or on an anus, or on any other portion of the woman's anatomy. Why less exposure when a child is to be borne and manipulations made that may mean the infection of abrasions that uniformally occur? Before this can be generally practiced the profession must overcome deeply ingrained prejudices for how many the charges by the ignorant that doctors unduly expose parturient women.

One other factor in prevention is the lessening of examinations, per vagina, through use of abdominal palpation in determining the position of the child.

Finally, one other point merits a thought and that is the question of drainage.

Among the poorer classes, negroes, and country women, sepsis does not occur with the frequency that should be expected from their environment during labor. Is it possible that the explanation is to be found in the fact that they get up very soon, thus giving the uterus the natural

drainage that is denied when the woman keeps flat on her back, even to the point of using the bed pan? Not only do they get the benefit of drainage, so esteemed in all other situations, but strange to note, displacements are no more common among them than among the women who are scarcely allowed to raise their heads for days.

LATIN AND MEDICAL NOMENCLATURE.

Does the medical profession require a knowledge of Latin? The State Board of Illinois, and others, perhaps, answer, yes. They require medical students to be able to construe easy Latin, mentioning Cæsar as a test. This action occurred to me as singular, that medical examiners test their examinees in Cæsar when there are other authors who wrote while the ancient Italian tongue was still classical, not on military subjects but on medicine. Celsus and his "De Medicina" is a far more appropriate textbook for a medical student to study.

But as to the need of knowing Latin at all it arises in this way: On account of having been the language of educated Europe in the middle ages we find latin phrases in use in all books of learning, of medicine, of law and of theology. As we find such phrases as "*grace de congruo*" in theology, and as in law reports we read "*quo warranto*" *nolle pros.*, so in ordinary conversation we have "*via*" and "*sine die*" and other common latin phrases. In medicine we have still more use made of latin. Many names of muscles, bones, arteries and nerves are latin names. The ingredients of a prescription are in latin, and directions to the druggist are often added in latin words. Of the three learned professions, therefore, medicine needs latin the most. The study of this language carries another recommendation, the opportunity of observing psychological processes in the mind that was framing speech. I think language and its study gives such an opportunity. It might seem to one beginning the subject that grammar was invented by some unpleasant person to confuse the minds of learners. Whereas, on the contrary, it is a science whose nomenclature is as old as those Greeks who invented it. Grammar shows that the mind has its laws of action, like a falling stone, or the descent of man. And that these laws are the same in all languages.

Grammars, and their "name is legion," are essentially alike. My aim is not to produce another but to indicate laws, by showing parallelisms existing between a so-called synthetical and analytical language; between latin and english. A language is a family composed of members, and our learning it, consists in deciphering the relationship in which the several members stand to each other. Instead of fathers, mothers, sons, etc., we have subject, object and predicate, which in English we distinguish by the order in which they stand in a sentence. In latin we know them by their endings, while the order of the words counts for nothing. In the simple sentence "Cain killed Abel" let us see how the latin use the accusative.

When put into latin "Abel" may stand anywhere in the sentence and still show itself the object by its ending. In primitive speech this relation was pointed out by a personal pronoun. To illustrate:

In Scotland, it is said, the subject of a sentence is designated by the pronoun he. And a preacher of the old style was expounding the text James 5: 8, "The devil as a roaring lion walketh about seeking whom he may devour." "We must consider," he said, "this subject under the following heads: First, who the devil–he was; Secondly, where the devil–he was going; and Lastly, what the devil–he was roaring at.

If the divine could designate the subject, "the devil" by suffix 'he', we see he could suffix 'him' to designate the object of a sentence. Thus in the example we can write, "Cain–he killed Abel–him" and it becomes unnecessary to retain the English order to see which is subject and which is object. We might write "Cain–he Abel–him killed." Again English-like, we will drop the "h" and the sentence reads "Caine Abelm killed," The letter "m" remains as the sign of the object, that is, the sign of the accusative case. So all cases may be shown to be suffixes, and all tenses and moods. This illustrates my idea of opening up the language. And the mind of man, in the production of a language, may be treated as Darwin treats animals in his "Origin of Species."

The Editor of the Journal of the American Medical Association has an editorial on "neurological nomenclature" and reviews two classes of obstructionists to its improvements, "the inert conservatives" and the "sentimentalists."

But these obstructionists and opponents swept aside, the knowledge becomes popularized, for the people choose the nomenclature that fits them. "Just think," he says, "of the waste of energy measured in horse power, required to express the daily range of ideas in a language like the Germans!" This waste could be avoided, he seems to think, by the use of a language

that psychology could invent, by which the expression of thought could be conveyed by least expenditure of 'horse power.' He expects as much of psychology as I do when I say that we do not want students dabbling in latin except to enable their minds to grasp a science that can be associated, not with dollars and cents, but with psychological factors.

HEREDITY AS A CAUSE OF ALCOHOLISM.

That heredity is a cause of alcoholism, and that alcoholism is a disease is becoming quite apparent.

We are reminded every day of the proverb in the good book that "the sins of the parents are visited upon their children to the third and fourth generations," this has been proven to be a fact in the hereditary effects of alcohol upon the system.

The person whose brain and nervous system have been injured, and whose moral and will power have been weakened, and whose stomach, liver and other organs have become deranged by the use of alcohol will transmit some of these derangements to his offspring.

The modern study of alcohol has proven without a doubt that it is not a stimulant or a tonic, but an anæsthetic and a narcotic, and it has also been proven that it is a remedy of but little therapeutic value and could be dispensed with, even for medicinal purposes with universal benefit to mankind. The transmissibility of an alcoholic inheritance has been very generally admitted by many writers, among whom are: Aristotle, Darwin, Rush, Morel, Carpenter, Richardson, Thompson and Forel.

The actual number of cases in which an ancestral history has been traced is probably much below the actual amount, as it is difficult to get relatives to admit the existence of an alcoholic taint, but it has been proven that the proportion of hereditary cases have increased five per cent. over the acquired during the past twelve or fifteen years. Norman Kerr found in over 3,000 cases of alcoholism fully one-half with an inherited ancestry, and about the same proportion has been the experience of others, who have studied the subject. Piper puts the proportion of hereditary to acquired cases as two to one.

Hereditary craving for strong drink can be transmitted by parents who have not that craving, but who drink very moderately and only by custom or sociability. As more light is thrown upon the therapeutic action of alcohol this customary drinking will gradually be abandoned, in fact it is becoming less customary at the present time. There has never been a time in America when every indication pointed so strongly to a decrease of intemperance as at present, and there has never been such a tendency toward moderation in quarters where alcoholic indulgencies are general.

In conclusion we would ask if one of the principal causes of inebriety is heredity, how is this form of inebriety to be cured and our future generation saved? There is but one answer and that is, to stop the drink habit at once, and as it has been proven by medical men that alcohol is not a food, and that it does not promote digestion, and that it does cause gastric disturbances, and that it does not increase muscular strength nor promote physical or mental endurance, and it is not a tonic or a stimulant, therefore we believe medical men ought to do all in their power to prevent its universal use as a beverage in social and political life.

THE EVOLUTION OF THE PHYSICIAN.

The young man choosing medicine as a profession, begins his studies with the ideas imbibed from the laity. One of these ideas is that the difference between physicians consists in their varying degrees of ability to successfully apply remedies in the cure, rather than in the management of disease. He enters a medical college, where he listens to lectures on materia medica and therapeutics lauding the virtues of drugs.

Teaching seems to involve a very considerable amount of dogmatism in order to impress the minds of students—to make the student accept rather than reason. It is readily seen why this has come about when one reflects upon what insufficient data a student must base his reasoning. Then, too, the lecturer on materia medica and therapeutics is usually a gentleman who is rather a firm believer in drugs from the necessity of the situation.

The student on graduating enters his professional career with exaggerated ideas of what drugs will accomplish—with exaggerated ideas of what he may and should expect in certain diseased conditions from the administration of remedies theoretically indicated. It is but natural that so many young physicians begin with the belief that if they could but procure Dr. A.'s remedy and management of dysentery, Dr. B.'s for rheumatism, Dr. C.'s for Bright's; if he could but procure the prescriptions of these men with reputations for curing these diseases, he would be equipped for the cases he would encounter.

As experience accumulates he gradually comes to the sad realization that prescriptions lauded by their promulgators do not

give in his hands the results he has been led to expect—that remedies theoretically indicated do not give always the results he so much desires.

As he gains experience and more knowledge, it dawns on him that contrary to what he had imagined, the difference between skilled and unskilled physicians does not consist in the ability to cure disease—that is to say in dosage—but in the knowledge of medicine—pathology, diagnosis, history of disease, prognosis. When he lets his mind's eye glance back a century or two into the past, the situation clears up. He sees at once that the difference between the physicians of that day could not be gauged by their judgment of the indication for bleeding and antimony in tuberculosis, in typhoid fever, in chronic nephritis, but only by their knowledge of pathology, diagnosis, history of disease.

When he looks around him at the present time he will find that in the best societies, as in the best journals, the discussions are largely devoted to the study of disease, and that the best and foremost physicians are those who know most, not those who use the most remedies.

He will find that he will gradually grow out of the idea of curing more than a very few diseases—that he will come to rely more and more on diet and on the natural tendency of most diseases to recover—on the *vix medicatrix naturae*.

THE TRI-STATE MEDICAL SOCIETY OF VIRGINIA, NORTH CAROLINA AND SOUTH CAROLINA.

The following circular letter was sent to many of the prominent physicians in North and South Carolina and Virginia, which fully explains its object:

"While in attendance at the North Carolina Medical Association, we were impressed with the evident desire of many of its members to become more closely identified with the profession of Virginia. Since then, in talking the matter over with others of the profession, we have concluded that it would be both pleasant and profitable to organize a Medical Association of the three States of North Carolina, South Carolina, and Virginia, thus forming a Tri-State Society, which would have for its object the cementing of medical bonds, since in every other way the mutual interests of these States are closely identified by location, social ties, and commerce.

"Accordingly, we write to ask if you will not act with us as a Committee of Organization to enlist the interest of the profession in these respective States to form such an association. You may think, possibly, that you belong now to more than you have time or inclination to attend. This may be true; why not, then, withdraw from some of these, that take so much time and money, and carry you so far away, and affiliate with us in the organization of one nearer home.

"We propose that this Committee of Organization shall be a representative one from different sections of the three States, and have written to prominent members of the profession asking their aid and co-operation.

"Hoping for a prompt and favorable response, believe us very truly yours.

"COMMITTEE."

A most gratifying response was received, hence it was deemed that the time was opportune for a temporary organization. Consequently a few members of the profession of the respective States were invited to meet at Virginia Beach, August 31st, during the meeting of the Medical Society of Virginia, to effect a temporary organization, if it was thought advisable. Quite a number responded in person and many by letter, so that we begin with a membership of twenty-eight from North Carolina, four from South Carolina, and twenty-nine from Virginia; total, sixty-one, which was accomplished without any special effort. After discussing the matter, it was deemed advisable to perfect an organization, which was done by the election of Dr. W. H. H. Cobb, of Goldsboro, N. C., as Temporary Chairman, Dr. H. H. Dodson, of Milton, N. C., as Temporary Treasurer, and Dr. Paulus A. Irving, of Richmond, Va., as Temporary Secretary.

After discussing the best modes of procedure, it was decided that the Temporary President, Dr. W. H. H. Cobb, of North Carolina, be empowered to appoint an Organization Committee from each State, who would issue a circular letter stating the objects of the Association, invite membership, appoint a date for permanent organization, arrange a programme, and issue a call for said meeting at some convenient city in North Carolina. It has been suggested that Tuesday, November 22d, 1898, and either Raleigh or Charlotte, a convenient and advantageous place for the first meeting. The exact time and place will be published later.

An interesting programme will be presented. A good number of papers from distinguished Physicians and Surgeons have been promised, and an opportunity is now offered to any one who wishes to read a paper at this meeting to send the title of such paper to the Temporary Secretary.

[The advantages of an organization of

this kind, uniting as it will the best element of the medical profession of these three States, will be invaluable. The sentiment in favor of organizing a society of the character this will certainly be is growing, and we can see no possible reason why the movement should not be encouraged and made a society that will be a pride and benefit to every physician, not only those living in these States, but the profession generally.

As the committee has not, at this time, rendered a decision as to where the first meeting will be held, but suggest either Charlotte or Raleigh, we will say that if Charlotte is chosen the local profession here will give them a warm welcome. Our city is noted for having the facilities and fondness for entertaining representative men when they come to see us.—Ed.]

MEDICAL SCHOOLS.

It is gratifying to note the gradual though decided change in medical education. Too much time was formerly devoted to didactic lecturing and too little to practical instruction in methods of cure, which is best given by means of clinics. The clinical method is encroaching more and more on the didactic, at the same time that laboratory methods are used to inculcate the theory by direct observation. All this is calculated to develop the scientific disposition in students. It is this disposition which is so useful to the doctor, for it is only through it that he becomes a progressive and useful force in medicine, leaving far behind his former ubiquitous rival the omniscient old woman.

This is all very gratifying, but it is not yet time for college men to think that the goal has been reached. Many practical methods of cure remain disregarded or are occasionally referred to in a manner which clearly indicates how little the lecturer or professor is acquainted with them. This being the case it is evidently the duty of the directors of medical colleges who wish to maintain their institutions in the front rank of modern progress, which is identical with the greatest efficiency, to introduce the study of these well tried and approved therapeutic measures, which have unfortunately not yet become the common property of the profession.

Let them establish chairs of electricity, balneology, massage, Swedish movements, gymnastics and psycho-therapy. In fact, there would be more propriety in dispensing with special chairs of ophthalmology, otology, rhinology, laryngology, diseases of the stomach, rectum, etc., in colleges devoted to the general pratice of medicine, than to omit as is now done all instruction in those practical methods of cure which should be the stock in trade of the general practitioner.

Let those who wish to pursue the specialties obtain their supplementary education at post-graduate schools established for the purpose, as they do anyhow. Oust the professors of organic specialties from the general medical colleges, if necessary, but by all means make way for the teachers of practical methods of healing.

PROPOSED CHANGE OF TITLE.

It is curious to note that drugs were at first given, not for their physiological or therapeutic action as we understand it today, but for their supposed power to expel or exorcise the demons which were thought to cause disease. It was the business of the medicine man to study the methods of utilizing the anti-demoniac properties of plants and other substances. How pertinacious and persistent a belief of this kind is, is witnessed by the fact that to this day the doctor is nearly always expected to prescribe. or give something, and the patient is just as ready and anxious to take something, while the more revolting the dose the greater is supposed to be its potency. At the root of all this, be it ever so shadowy, lies the old idea of exorcism. That the profession has gotten ahead of the laity in shaking off this remnant of our barbarous ancestry, is witnessed by the *placebo*. We hope the day is not far distant when through the development of intelligence and morality, it will be considered not only unnecessary but undignified and quackish to prescribe a placebo. Under normal conditions the lie will be as ltttle necessary in medicine as in religion, as Zola very aptly remarks. We believe that there is sometimes very much in a name, Shakespeare to the contrary notwithstanding, and that the designation medical man, as a direct lineal descendant of medicine man has a tendency to strengthen the old, persistent superstition of the disease, demon and drug, exorcism. However this may be the designation is indeed too narrow for a man who prescribes diet, exercise, rest, baths, clothes, residence and numerous other things besides drugs for the purpose not only of curing disease, but also of preventing it. "Physician" which means the man who prescribes or dispenses physic is no better, and reminds one of "leech" which stood for doctor in the middle ages when bleeding was the principal medical procedure.

While doctor is good enough for a form

of address, it will not do as a distinguishing title, for it is applied to the devotees of other professions. "Doctor of Medicine" our present academic title is objectionable for reasons given.

While we recognize the impossibility of exercising control over the manner of our designation by the people while we must even patiently submit to being dubbed allopath by the pseudo-enlightened, and addressed as "Doc" by our friend the hail-fellow, well-met, we submit that our medical colleges and universities could perchance be persuaded to give us and future graduates the title Doctor of Sanitary Arts, which could be represented by the initials D. A. S., standing for the Latin phrase—*Doctor Artium Sanandi*. Or can some one suggest a still better title?

HYPOCRISY IN MEDICAL SCHOOLS.

Some time ago a Baltimore medical school advertised in the daily papers that alcohol and all its preparations were to be excluded from the drug list of its dispensary and hospital. This announcement was no doubt made simply as a concession to a large but deluded temperance element, but with no intention of carrying it into effect; as we are reliably informed that the administration of drugs at the institution in question is practically the same as at any other conducted by the regular profession.

Recently a great commotion took place in the faculty, the cause of which is unknown to the writer; but the result of it was the founding of a new medical college by the members who had resigned their positions at the old school. An interesting point in this connection is the confirmation of the law of heredity even in medical colleges. For lo! and behold! the same hypocrisy that characterizes the old school, is reproduced in its offsrping.

The daily press is again called upon to make the announcement of the exclusion of alcohol simultaneously with the heralding of the birth of the school. But let us be a little guarded in our diagnosis, for the hypocrisy of the mother may have been transmitted as some other grave disorder in the descendant. It may indeed be the intention of its faculty to exclude alcoholic preparations from its list of drugs and also to preach what it practices. However, should this be the case, we will only have the spectacle of a new medical crankism, which can worthily take its place by the side of homeopathy and Christian science and contribute its share to the disruption of medical endeavor into the various directions prompted by sentiment, sentimentality and superstition, or the desire to cater to them, which is the same thing; but assuredly not to the development of a medical science, founded solely on experience and investigation, such a science as can alone benefit suffering humanity.

This latter view is improbable, however, and it is very likely that we have before us in both cases nothing but shameless hypocrisy. For this reason we cannot countenance either college. We do not think that such a policy is calculated to maintain the dignity and self respect of the faculty nor to lead to the graduation of honest and efficient doctors.

MEDICAL FADS.

Throughout the past, succeeding generations have demanded something new, and the kaleidoscope views of modern society will not permit the limitations of these desires to commerce, society, and religion. The literary and scientific pursuits are em bellished by the euphonious prefix or suffix; but to the domain of medicine—more than any one vocation—has come the popular demand for new names and treatment, until many medical libraries are sunken in the maelstrom of non-scientific—but so-called —medical writings.

The principles of medicine are eternal and never have they shone brighter than during these closing years of the nineteenth century, while the search light of scientific medical knowledge is relegating Hahne manic theories into oblivion, and exposing the vagaries of Osteopathy, Christian science, and numerous other excrescent growths, from rational medicine. The votaries to these "fads" are analogous to the vegetarian, in the selection of their mental pabulum; and eliminating every correlative element to their one idea, it soon impresses the imprint of reality and may be styled an offshoot or "fad," while its projector, like the ambitious and over-confident youth, proceeds to dissect and annihilate the thing to which he owes his very existence, and separated from which, he would soon perish. High nervous tension and mental strain, as the bane of modern civilization, is compelling many persons to seek medical advice, for a condition which is but the logical sequence of an over-worked or otherwise exhausted nervous system, The name neurasthenia, evolved and christened by Beard, for the legion of symptoms incident to this condition of the system, has become so fashionable, that its prefix or suffix is quite imperative in naming almost every functional disorder, that tends to disturb the nervous equilibrium, hence the "gastric

neurasthenia," if the digestive system be disturbed, and "cerebral or spinal neurasthenia," if the functions of the brain or cord be implicated, while a constitutional disorder may be a "malarial or syphilitic neurasthenia." Not infrequently the generative organs are the centre of much concern, and "sexual neurasthenia" offers a comforting term for what may be a disorder of the sexual organs, but is possibly of psychical origin.

Medical "fads" are not wholly useless, for they offer many useful hints to the careful clinician, and become harmful only when used to exclude, rather than elucidate medical truths.

TYPHOID GERM IN NERVE TISSUE.

At this season of the year the physician in general practice is reviewing the literature to fortify his intellectual and therapeutical armamentarium for battle with his typhoid cases.

Such effort is no less commendable than would its negligence be reprehensible; but under the broad search light of more recent neurological observation, the physician's duty to himself and the patient, does not cease with the latters convalescence. The typhoid germ having spent its primary power on the glands in the bowels, and these meeting the antiseptics of modern therapeutics, is disabled for mortal combat; but lurking still in the human economy we find a special influence of the poison on the brain, interfering with phonation or hearing. Impairment, too, of memory is not uncommon, and derangement of the intellect occasionally follows.

Cerebral symptoms consequent upon a typhoid attack are alarming, but less ominous than paraplegias and multiple neuritis, but more especially poliomyelitis. That there should be a peculiar affinity between the gray matter of the nervous system and the typhoid bacillus, may be even more difficult to explain, than why it should by preference select "Peyer's Patches" as the more vulnerable point of attack, yet clinical evidence is abundant in support of this view.

If we accept these conclusions, our explanation of the numerous local motor disorders following typhoid attacks, may be more rationally accounted for, and their appearance being anticipated, may be either prevented, or materially ameliorated, by continuous observation and treatment of the patient, *beyond* the period when he can eat and sleep well, but has not yet "gained his former strength."

SPINAL SCLEROSIS.

The indiscriminate use of the term "sclerosis" may be the means of much confusion and not a few errors in diagnosis. It is more properly used as indicating the *results* of diseased process, than as descriptive of the malady. Induration in the connective tissues of the cord is as truly a sequence of altered nutrition in the nervous system, as is the fibroid growth consequent upon pathological changes in fibrous membranes. Anatomical and pathological investigation has furnished material evidence sufficient to justify the careful clinician in a diagnosis of a posterior, from a lateral sclerosis; or the recognition, of a combined lateral and posterior sclerosis.

If symptoms in alimentary disorders are legion, and the differential diagnosis in a gastric or pancreatic affection, is determined by the *character* and *constancy* of the dominating features; so the clinical evidence of a cord disease become evident, when we recognize the persistence of a departure from physiological activity in any one or more of its functions. Moreover, the diminished or excessive, activity of any one function of the cord, is not of itself sufficient evidence for conviction to a definite diagnosis, else every instance of constant absence of the knee reflex would prove a case of Friedreich's ataxia, which conclusion might not only be erroneous, but a most serious mistake for the patient, if subsequent progress in the malady developed lancinating pains, and bladder and rectal sphincter impairments; symptoms which are seldom, if ever, met with, in that disease, but are the second and third legs to the triphod, so pathognomonic of tabes. Integrity of *muscular power* is the rule in posterior sclerosis, while its loss is a very common characteristic, and with it muscular atrophy, is seen in nearly every other form of spinal sclerosis.

CLIMATIC CURE FOR TUBERCULOSIS.

So much has been written about the climatic cure for tuberculosis, but few comprehend its full value.

A great many physicians not living near the so-called health resorts, seldom recognize the factors necessary to be taken into consideration, to obtain the results desired.

How often do the physicians living in the climates beneficial to tuberculosis, and it matters not whether it be Asheville, Arizona, Colorado, or New Mexico, see the errors of delay made by their brethren in distant parts of the country.

Patients, in order that they may derive the full benefit from the climate should be

sent, if possible, while the disease is still in the early stage.

Many are the cases, of so-called bronchitis, that have waited and hoped, growing worse daily. Then, as a last resort, the attending physician, sends the patient, now a hopeless wreck, to the climate that would have given health and strength earlier in the disease.

Too much stress cannot be laid upon the necessity of sending these cases while in the first stages.

The writer has seen so many cases sent away from home to die in a few days or a few weeks among strangers. Some, perhaps, more fortunate, realizing their condition, return against the physician's advice and pass away at home.

Now let us consider the case from the physician's standpoint.

If all cases were sent away from home at once it would materially lessen the physician's income. But is the true physician to consider this?

He is licensed by his State and alma mater to practice medicine for the good of humanity. He is pledged virtually to do what is best for his patients, regardless of his own consideration from a monetary view.

Many more of these cases would recover than at the present time if sent to these resorts early. The physician cannot conscientiously refuse to do this.

MEDICAL LEGISLATION.

Kentucky has taken the lead! It has set a brilliant example for the other States to follow.

Through the energy and perseverance of the Kentucky State Board of Health, no form of quackery has a foot-hold within its borders.

No doubt it took time and money to accomplish this, but what Kentucky has done all other States can do.

But to do this a concerted action of physicians in each State must be had.

In Kentucky none but physicians with recognized diplomas are permitted to practice medicine.

The disciples of Mrs. Eddy are no longer permitted to ply their trade upon the ignorant and superstitious.

Nor do the followers of Dr. Still reap the rich rewards, as of old, for their labors.

These, as well as all other varieties of quacks, have "silently folded their tents and stolen away."

But physicians must recognize in attacking these vultures of humanity that they have a hard proposition before them.

Being supported by the laity, who, as a rule, seem to think that:

"Every quack can give relief,
And every doctor is a thief,"

they go on plying their nefarious trade, to their patients' as well as the physicians' detriment.

It is certain that "politics and medicine do not mix," but it most certainly behooves the medical profession to enter politics far enough to get favorable legislation.

Medical men seem to think it useless to attempt legislation of any kind.

True, it seems up hill work, but if systematically persevered in, success will be the result. It may take years to do this, but by unceasing energy on the part of the medical profession it can be accomplished. The different State legislatures, if properly attacked will respond.

In every one of these bodies there are men who realize the standing of the quack, and are willing to aid the profession in their efforts. Kentucky has proven this. Let the good work go on.

RECTAL DISEASES.

For many years past, almost by common consent, it seems, the treatment of rectal diseases has been delegated to the quack.

Why this important branch of medicine should be so neglected, seems almost a mystery. Owing to this neglect by the profession, and the credulity of the general public, the quack has had a very fruitful field to work upon.

His returns, financially, have been large, but the evil effects, the ruined constitutions and the suffering which have followed in his wake are most appalling. Through the daily press this paragon of knowledge heralds his virtues.

He claims to cure any rectal disease to which flesh has ever been heir, "without the use of the knife."

This cure is always for a stipulated sum in advance. This his victim readily pays and goes forth to tell all humanity what this mighty wonder is going to do for him.

Now watch this patient for a while. In a short time his boasting gets less and less, while his trouble grows worse and worse. In the large majority of cases he has paid his money, only, to get no return.

He again seeks his advisor, the daily press, chooses another paragon only to go through the same program.

After many failures and much experience gained, this patient at last seeks advice from a competent surgeon. He is now told, if operation is necessary, the knife must be

used, or if not, the proper remedies prescribed, and the patient relieved.

But, on the other hand, too often, is it the case, that the disease has made such progress that the patient is beyond the hope of relief.

Is the medical profession to blame for this condition of affairs? To a certain extent this seems probable, on account of failure to give these cases proper care.

Many physicians prescribe for them without any, or at most a very superficial, examination. They do not know the condition present, and the patient gets no relief. Therefore, is it any wonder that these patients after trying several physicians, eventually drift to the quack, who promises to cure all who come under his care?

BOOK REVIEWS.

An American Text Book of the Diseases of Children. Including Special Chapters on Essential Surgical Subjects; Diseases of the Eye, Ear, Nose and Throat; Diseases of the Skin: and on the Diet, Hygiene and General Management of Children by American Teachers. Edited by Louis Starr, M. D., Physician to the Children's Hospital and Consulting Pediatrist to the Maternity Hospital, Philadelphia; Late Clinical Professor of Diseases of Children in the Hospital of the University of Philadelphia; Member of the Association of American Physicians and of the American Pediatric Society; Fellow of the College of Physicians of Philadelphia, etc. Assisted by Thompson S. Westcott, M. D., Instructor in Diseases of Children, University, Penn., etc. Philadelphia: W. B. Saunders, Publisher. 1898. Sold by subscription. Price, cloth, $7. sheep $8.

About four years ago we had the pleasure of receiving the first volume of this magnificent work on Diseases of Children. A second edition of a volume of this character and magnitude appearing within four years shows to what a great extent it has been appreciated by the profession. It has become so universally known and extensively used that a review seems hardly necessary. The editor of this volume is a man of distinction and scholarly attainments. The list of contributors are men of the highest professional achievements and broadest experience, and each article is from the pen of a writer upon a subject to whch he has given much thought and of which he is master.

In this second edition the whole subject matter embraced in the first edition of this work has been carefully revised; new articles have been added; some of the original papers have been emended, and a number have been entirely rewritten and brought up to date. The new articles include "Modified Milk and Percentage Milk Mixtures," "Lithæmia," and a section on Orthopœdics. Those re-written are "Typhoid Fever," "Rubella," "Chicken Pox" "Tuberculous Meningitis," "Hydrocephalus" and "Scurvy;" while more or less extensive revision has been made in the chapters on Infant Feeding, Measles, Diphtheria and Cretinism. The volume has been increased by at least fifty pages of fresh material. The book is most handsomely printed on clear paper and plain type, and is the best contribution to the knowledge of the Diseases of Children that has yet been handed out to the progressive and intelligent profession. We commend the labors of the editor as having been conscientiously performed and as being entitled to an equally conscientious and patient reading. This treatise is the one for the student and practitioner to purchase and adopt as his guide.

Manual of Chemistry. A Guide to Lectures and Laboratory work for Beginners in Chemistry. A Text-book specially adapted for Students of Pharmacy and Medicine. By W. Simon, Ph.D., M. D., Professor of Chemistry and Toxicology, College of Physicians and Surgeons, Baltimore; Professor of Chemistry in the Maryland College of Pharmacy. New (Sixth) edition. In one 8vo. volume of 532 pages, with 46 engravings and 8 colored plates illustrating 64 of the most important chemical tests. Price Cloth, $3.00, net. Lea Brothers & Co., Publishers, Philadelphia and New York.

The medical student, as well as the general practitioner, is to be congratulated on the appearance of this the sixth edition of Simon's Manual. The science of chemistry has so rapidly grown that one may give his whole time exclusively to it and then be not master of the situation. In reading this book it seems that the author has done every thing that should have been done and left undone things that are irrevelant. The work is divided into seven parts. The author begins by giving the fundamental properties briefly. The fundamental priciples must be laid down. This being necessary for an understanding of chemical phenomena. Part second treats of the principles of chemistry. Under this head the author enters into a brief discussion of theoretical views regarding the atomic constitution of matter. No chapter in the book is of more importance than this one, and none is presented in a clearer manner or can be more readily understood. Part third is devoted to non-metals and their combinations. The

fourth chapter treats of metals and their combinations. Under each of these chapters the symbols and atomic weight of the various metals and metalic elements are given. All the chemicals that are mentioned in the United States Pharmacopœa are included, and this makes the book specially useful to students of pharmacy and of the medical inclination. Chapter fifth is devoted principally to analytical chemistry. Under this head the student wlll find special benefit and aid in his laboratory work, which is often an arduous task and a duty difficultly performed. The quantitative method is chiefly explained in one short article. Part six treats of carbon compounds or organic chemistry. The seventh and last chapter is devoted to physiological chemistry, and the author states that this chapter was written specially for students. A great deal of new matter has been added to these chapters, and special care has been taken to mention the most modern methods for clinical examinations in clinical diagnosis. One thing which will be of great help to the student is the questions at the first of the page. This familiarizes him with the most important questions that might probably be asked him before the many Boards he now has to be prepared to meet. The book is well illustrated, tastefully bound, without typographical blemish, and is the best chemistry we have reviewed. We congratulate the publishers upon the appearance of this book, and as it goes to the profession, students and practitioners will do well to purchase at once.

An American Text-Book of Gynecology, Medical and Surgical, for the Use of Students and Practitioners. Edited by J. M. Baldy, M. D., assisted by a corps of Ten Contributors. 341 illustrations and 38 colored half-tone plates. Philadelphia: W. B. Saunders, 1898. (Sold by subscription only). Price, cloth, $6.00; sheep or half-morocca, $7.00.

Scarcely is a reviewer's table ever graced with a more handsome, complete and magnificent volume than the one now before us, and in as much as it is the most modern of our works of this kind, prepared exclusively by American authors, it will naturally receive a warm and hearty welcome. The ideas and thoughts herein expressed are from the pens of the most prominent and celebrated teachers in America's medical schools. It is a practical book, written by practical men. It is an American work, and from this fact it should receive special attention at the hands of American physicians.

In this, the second edition of this excellent work, the author has rendered us as complete a book as is consistent with a clear enunciation of the practical working of gynecology. Much new material has been added, and some of the old eliminated or modified. The portions devoted to plastic work have been so generally improved as to be practically new.

After a cursory examination we notice that the opening article pertains to an examination of the female pelvic organs, and it embraces a description and illustrations of all the instruments, tables and apparatus used in the course of gynecological examinations; the various postures assumed by the patient in examination and operation, and clear descriptions of the different methods of examination with each one fully illustrated. Following this chapter is an interesting description of the Technique of Gynecological Examinations.

This chapter contains the most recent and approved methods of preparation of the operator, assistants, nurses and patient for operation, both abdominal and vaginal; the best and most reliable methods of preparation and disinfection of sponges. ligatures, sutures, etc. In fact the success of modern Gynecological Surgery rests on the adoption of the principles and details described in this chapter, which is fully up to date. While all the chapters are so interesting and pleasing, space will not allow us to notice all. Among a few others we will notice the chapter on Inflammatory Diseases of the Uterus. Under this heading is included the conditons known as metritis, endometritis, subinvolution, etc., their prevention and treatment. The operation for dilatation and curettement are described and fully illustrated, and the indications for their use carefully pointed out. The chapter on Pelvic Inflammation is considered from an entirely different standpoint from that found in the older text-books. The subject is covered in a thoroughly practical manner. The pathology and etiology are clearly pointed out, the results described, and the management and treatment in all phases considered in detail. The old and confusing nomenclature and pathology have been dropped and the data given from facts as found to-day. The closing chapter is devoted to after Treatment in Gynecological Operations. Under this chapter is given in detail the exact methods for nursing a patient after vaginal and abdominal operation. The author thinks this chapter second only to the one on Technique. In reading the pages of this book we are struck with its practical teachings. Indeed we do not know of a book that has given us so much real pleasure. It is truly a working textbook for students and physicians. A clear

line of treatment has been laid down in every case, and, although no attempt has been made to discuss mooted points, still the most important of these have been noted and explained; and the operations recommended are fully illustrated, so that the reader may have a picture of the procedure described in the text under his eye, and cannot fail to grasp the idea. The illustrations are beautiful and the work is profuse with wood cuts, half-tone and colored plates, mostly original and selected from the author's private collection. The editor is to be congratulated upon the success of his noble work.

The publishers have shown commendable enterprise in equipping this valuable work with paper and typography that makes it so attractive to the reader. A carefully prepared and complete index closes a volume which is a credit to American medicine and American medical publishers.

A Text-Book of Materia Medica, Therapeutics and Pharmacology. By George Frank Butler. Ph.G., M. D. Philadelphia: W. B. Saunders, 925 Walnut Street, 1898.

This is the second edition of this work within two years thus showing the very favorable reception and appreciation of the work by medical teachers, students, and physicians generally. In this second edition the recent important additions made to the knowledge of the physiological action of drugs principally relate to antipyretics, antiseptics, aconite, and strychnine. Many alterations have also been made in the chapters on diuretics and cathartics.

No branch of therapeutic science has perhaps, been more neglected than a practical acquaintance with the nature and uses of materia medica, their origin, potency, and characteristic value, as well as their physiological action, and the incompatible and synergistic agents upon which their efficacy often largely depends.

I am glad this book has been written. It gives to the student a clear, concise, and practical text-book. The author has arranged the work from a synthetical classification of drugs, based upon therapeutic affinities. The first part of the book is taken up with Introduction, Pharmacology and General Therapeutics, Classification of Medicines, Administration of Medicines, Deffinitions, Weights and Measures, Pharmaceutical Preparations. After a clear discussion of these very important branches, the work is divided into two classes. Class I., Medicines; Class II., Symptom Medicines, with a final discussion of Topical Remedies, Prescriptions, and a good Index.

We have no hesitation in recommending this book to the favorable consideration of the profession, and more especially to that of the general practitioner, as a valuable aid in every day work. The publishers have presented the profession a neatly bound and faultlessly printed volume.

A Clinical Text-Book of Medical Diagnosis for Physicians and Students, based on the most recent methods of examination. By Oswald Vierordt, M. D., Professor of Medicine at the University of Heidelburg. Formerly Privat-Docent at the University of Leipsig. Later Professor of Medicine, and Director of the Polyclinic at the University of Jena. Authorized translation with additions by Francis H. Stuart, A. M., M. D., Member of the Medical Society of Kings county, N. Y., Fellow of the New York Academy of Medicine. Price, Cloth $4.00. Sheep, $5.00. Philadelphia: W. B. Saunders, 925 Walnut St. 1898.

It has only been a few years since we had the pleasure of reviewing the third edition of this work, and now we have before us the fourth edition, with many additions and improvements, which makes it the most thorough and complete work on Medical Diagnosis now published in our language. The success of this work has indeed been very flattering, having gone through four editions within a very short time.

Prof, Vierordt's Diagnostik der Innerer Krankwheiten has created and met a demand which is remarkable in Medical literature. Less tban nine years elapsed between the date of the first edition and that of the fifth, from which the present translation is made. During this period the progress in various departments of diagnosis has been great, but has been kept fully abreast of this progress. The author has carefully revised his work four times.

A Treatise on the Science and Practice of Midwifery. By W. S. Playfair, M. D., LL. D. F. R. C. P., Emeritus Professor of Obstetric Medicine, in King's College, London. Examiner in Midwifery to the Universities of Cambridge and London. Seventh American from the Ninth English Edition. In one very handsome octavo volume, of 700 pages, with 207 engravings and seven full-page plates. Cloth, $3.75, [net]: leather, $4.75 [net]. Lea Brothers & Co., Publishers, Philadelphia and New York.

Playfair's work is one of the best books in the English language. It can be found in almost every medical library and upon every student's table. This is the Ninth edition of this work. The large edition of 1893 has been exhausted. Many changes

have heen made in this edition to keep pace with the rapid advance of obstetric science. Those who have studied the progress of midwifery know that there is no department of medicine in which more has been done of late years, and that there is none in which modern views of practice differ more widely from those prevalent only a short time ago. This work puts into the hands of the profession an epitome of the science and practice of midwifery which embodies all recent advances. The work is well printed and bound. This new edition gives evidences of revision date on every page, and as it is authoritative, clear, well illustrated, and moderate in price, it will doubtless continue to be the favorite student's textbook and the practitioner's trusted counsellor.

Diseases of Women: A Manual of Gynecology. Designed especially for the use of Students and General Practitioners. By Francis H. Davenport, M. D., Assistant Professor of Gynecology in the Medical Department of Harvard University, Boston. New [third] revised and enlarged edition. In one handsome 12mo volume of 387 pages with 155 illustrations. Cloth, $1.75 [net]. Lea Brothers & Co. Philadelphia and New York.

This book of 391 pages fulfills two principal objects. It gives to the students, clearly, but with considerable detail, the elementary principles of the methods of examination, and the simple forms of treatment of the most common diseases of the pelvic organs, and helps the busy general practitioner to understand and treat the gynecological cases which he meets with in the course of his every day practice. The author has very wisely left out pathological anatomy, and the diagnosis and treatment have received the most attention. The work pays attention to many minor points of importance which are left out in larger works. The work is a very practical one and seems exactly to fill a gap for which it was intended. Illustrations are used when necessary. It is well printed.

Medical Diseases of Infancy and Childhood. By Dawson Williams, M.D., Physician to the East London Hospital for Children. In one 12mo. volume of 629 pages, with 18 illustrations. Cloth, $2.50, net. Lea Brothers & Co., Publishers, Philadelphia and New York.

Dr. Williams has given us a good book on medical diseases of infancy and childhood. It offers to young practitioners of medicine, and to those who have not previously paid much attention to the subject, a guide to the cllnical study of disease as it occurs in infancy and childhood. The writer indicates the special incidence of disease in childhood; elucidates as far as possible the causes of this special incidence; points out the peculiarities which the circumstances of child life impress upon familiar diseases, and details the treatment rendered appropriate by the nature of the disease itself, and by the peculiar susceptibility of the growing organism. Under each disease is given the name, the symptoms, the diagnosis, prognosis, complications and treatment. The work is up to date in every sense, and will prove of inestimable value to physicians and students. The book is well bound, nicely printed and contains many handsome cuts. We heartily recommend the book to our readers.

The Essentials of Histology, Descriptive and Practical. For the Use of Students. By E A. Schafer, LL.D., F. R. S. Lea Brothers & Co., Philadelphia and New York. 1898.

This work represents the mature labors of Prof. Schafer, and no student or physician can hardly afford to be without this work. It well represents the progress made both in histological studies and methods of illustration. It supplies the student with directions for the microscopical examination of the tissues. It also serves as an elementary Text-Book of Histology, comprising all the essential facts of the science. The book is divided into forty-six lessons. The photographs are numerous and fine. It contains 356 pages, with a good index. The mechanical execution of the work is good.

An Abridged Therapy Manual for the Biochemical Treatment of Disease. By Dr. Med. Schnessler, of Oldenburg. Twenty-Fifth edition, in part Rewritten. Translated by Prof. Louis H. Tafel. Philadelphia: Boerick & Tafel. 1898. Cloth, $1.00.

This is the only authorized translation of this work on Biochemistry published. It contains 178 pages, and presents the subject in question in a very clear light. A nice obituary of Dr. Schnessler will be found at the beginning. The little book is neatly bound and nicely printed.

Glaucoma; Its symptoms, Varieties, Pathology and Treatment. By Alex. W. Stirling, M. D., C. M. [Edin.]; D. P. H. [Lond.], Atlanta, Ga.; St. Louis, Jones H. Parker. 1898.

In this work will be found everything of interest and importance about Glaucoma. It treats very fully the different forms of Glaucoma, their etiology, symptoms, diagnosis, prognosis and treatment. The last chapter is devoted to the methods of operation. The volume has a good index.

Elements of Histology. By E. Klein, M. D., F. R. S., Lecturer on General Anatomy and Physiology, and J. S. Edkins, M. A.. M. B. Revised and enlarged edition. Lea Brothers & Co., Philadelphia and New York.

This work contains five hundred pages, with a good index. Considerable additions are found in this edition since the one of 1889. The progress in the knowledge of the structure and life of the cell and uucleus, the remarkable discoveries in the structure of the central nervous system and sense organs, have made it necessary to revise and to make considerable additions to the chapters dealing with these organs. The first chapter is devoted to a complete description of cells, with fine illustrations. After this is a section on the blood, then the epithelium, bone, muscular tissue, &c. It is a very complete work on the subject treated, and the student and physician will find in it valuable assistance.

LITERARY NOTES.

The Living Age, in its issue for October 1st, is to begin a new serial story, translated for its pages from the French of Th. Bentzon, (Mme. Blanc.) The story is entitled "Constance" and it is the study of the life of a young girl. Important ethical questions, especially that of divorce, are touched upon, and the story has a high moral purpose. The translation is made by Mrs. E. W. Latimer, and is authorised by Mme. Blanc.

With the first number of October, The Living Age, the weekly electric magazine which for more than fifty years has been a favorite with American readers, begins a new series and appears in a new and attractive dress, suggesting The Atlantic Monthly in the clear legibility of its page. The familiar cover is to be retained, but it has been newly engraved and otherwise modernised.

The Living Age, being a weekly magazine, suffers somewhat by comparison with the monthly magazines of the first class, if the comparison is made of single numbers. But The Living Age actually gives a larger amount of matter each month than any of the monthlies. Thus Harper's Magazine contains 172 pages each month; The Century 160 pages; Scribner's Magazine 128 pages; and The Atlantic Monthly 144 pages; while The Living Age gives each month from 280 to 334 pages, according as there were four or five issues.

Florence Bell's "Plea for the Better Teaching of Manners" in The Living Age for October 1st, will be profitable to all who, as teachers or parents, have anything to do with the training of young people.

Lippincott's Magazine for October, 1898.—The complete novel in the October issue of Lippincott's is "Confessions of an Aide-de-Camp," by Captian F. A. Mitchel. It is a rattling tale of the Civil War, and the heroine and hero(especially the heroine) pass through some surprising adventures.

Other stories are "Tish's Triumph and Grandma's Diamonds." The latter is by R. L. Olbar.

Apropos of "War and Trade," Fred Perry Powers maintains that the two are closely related and interacting; that "the more commerce is extended the more danger there is of war," and that war, while possibly necessary for the defence of commerce,tends rather to promote than to check it.

Lawrence Irwell writes of "Declarations of War," Lizzie M. Hardley of "Artillery, Ancient and Modern," and George J. Varney of "Military Balloons."

"A Family history," pleasantly recorded by Adeline Knapp, is that of certain California grosbeaks. Dr. Charles C. Abbott discourses, with his usual originality and point, "In Defence of Desolation." "Oklahoma Claims" are described, vigrously and with humor, by Helen C. Candee, who knew the territory in its early days, and gives instances of the value of "hustling" and the inequalities of justice there.

Nina R. Allen discusses "Gray Eyes in Fiction," and, incidentally, some of the heroines to whom they belonged.

The poetry of this number is by Carrie Blake Morgan, Charles Hanson Towne, and Clinton Scollard.

The American Monthly Review of Reviews for October gives special attention to the developments of the past month in international politics and to the lessons of the Spanish-American War. The editor, in the department of "The Progress of the World," discusses the attitude of the Spanish people toward peace conditions, the new relations between Germany and England, the Czar's proposition for disarmament, the Dreyfus case in France, England's reopening of the Soudan, and other serious problems confronting the European powers. Important contributed articles review President McKinley's course in the conduct of the war to a successful close and the deficiencies in our administrative machinery revealed by the fatal delays and break-downs in the medical and subsistence departments of army management.

MISCELLANEOUS.

Congenital Deformities of the Hands,

Francis R. Sherwood, M. D., in The Chicago Clinic, September, 1898, contributes an article of unusual interest. The following is an abstract:

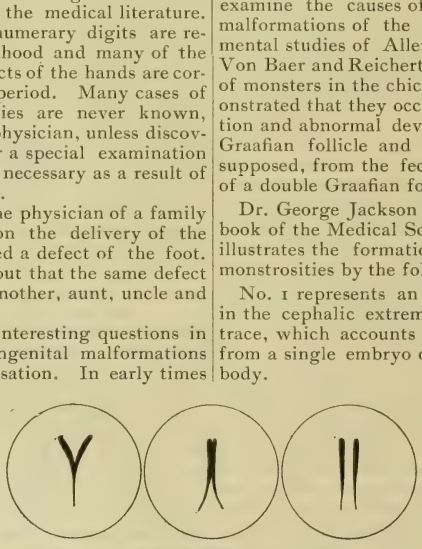
Anomalies of the hand are not an infrequent occurrence. The variety of the deviations from the normal are very great, from that of a double hand, as reported by Geraldes and others, or one with supernumerary digits, or cleft hand, as operated on and reported by C. N. Dowd (Annals of Surgery, 1896), or with suppression of digits, and so on down to congenital absence of the hand. Perhaps the most frequent congenital deformity of the hand is that of supernumerary digits. The writer attended school with a family in which there were supernumerary digits of the hands and feet in both males and females in two generations. Some of the children were normal. The father of one of the families had a cleft palate without any deformity of the hands. These cases have never been recorded. Those who possess the deformities, as well as the parents, are always more or less sensitive about advertising them; consequently no doubt the greater number of them never reach the medical literature. Most of the supernumerary digits are removed during childhood and many of the most unsightly defects of the hands are corrected at an early period. Many cases of congenital deformities are never known, even by the family physician, unless discovered by accident or a special examination of the part becomes necessary as a result of a diseased condition.

The writer was the physician of a family for four years and on the delivery of the first child discovered a defect of the foot. It was then found out that the same defect was present in the mother, aunt, uncle and the grandfather.

One of the most interesting questions in connection with congenital malformations is that of their causation. In early times witchcraft, demonology and copulation with the devil or lower animals was held responsible for the causation of monstrosities and malformations. Human deformities were supposssd to show the displeasure of the gods, and when occurring in animals they were thought to portend dire calamities. Bichat was the first who recognized the true causes of malformations and placed them on a scientific foundation when he associated them with embryogenesis. Many physicians, from whom more rational views ought to be expected, and the majority of the laity still look upon maternal impressions as the principal cause of malformations. This view is not only wrong, but it is an injury to the comfort and well-being of many mothers, who live in constant dread and fear during the period of gestation, lest they behold some hideous object which will leave its imprint on their offspring. There is not a single argument, which has for its foundation a scientific basis, in favor of the fact that maternal impressions or mental emotions cause birth-marks or malformations of any kind. Anomalies occur among the lower animals and in the vegetable kingdom which have their counterpart in human deformities, but no one, for a moment, thinks these are due to maternal impressions. All of these anomalies can be explained from an embryological standpoint. To fully understand the causes of deformities of the hand, it will be well to examine the causes of the more striking malformations of the body. The experimental studies of Allen Thompson, Wolff, Von Baer and Reichert on the development of monsters in the chick embryo have demonstrated that they occur from the fecundation and abnormal development of a single Graafian follicle and not, as many have supposed, from the fecundation and fusion of a double Graafian follicle.

Dr. George Jackson Fisher, in the Handbook of the Medical Sciences, very plainly illustrates the formation of some of these monstrosities by the following cuts:

No. 1 represents an embryo with a cleft in the cephalic extremity of the primitive trace, which accounts for the development from a single embryo of two heads on one body.



(Fig. 1.) (Fig. 2.) (Fig. 3.)

No. 2 represents a cleft in the caudal extremity of the primitive trace, which accounts for the development of two bodies from a single embryo with one head.

No. 3 represents two separate and distinct primitive traces on the same embryo from which a double monster may be developed, as in the case of the Siamese twins.

It was observed by the above experimenters that the closer the primitive traces were located to each other, on the chick embryo, the more intimate was the blending of their bodies. The deeper the dicotomy or the division of the cephalic or caudal extremities of the primitive traces, the more marked was the individual development of the heads or the lower portions of the bodies; the less marked the dicotomy, the greater was the effusion of the parts in the future process of the development. It has been found from the dissection of monsters that the corresponding parts of the body unite with each other with the same regularity with which we find the two halves of a body uniting. Corresponding muscles, organs or bones, as well as relative portions of the head, chest or abdomen, were found united with each other. This shows that these parts are developed in unison just the same as the two halves of a body.

"A strong tendency exists in the animal and vegetable kingdom for parts ending in free extremities to bifurcate or dicotomize." —J. Bland Sutton. The extremities grow from the axial part of the trunk, and if any one of them is affected by dicotomy, a double limb is developed just as in dicotomy of a portion of the body. If dicotomy only affects a portion of the distal extremity of the limb and it extends as far back as the carpal bones, a double hand is developed. Should it only affect one of the fingers, we get a development of a supernumerary finger. Instances of congenital deformities are not wanting where it is plain that there has been a suppression in the development of some of the parts, even after normal development had progressed for some time; so that we get imperfectly formed parts, or we may have a complete suppression of development of a portion of the body from the beginning, so as to cause an entire absence of parts. "Dicotomy occurs in the limbs of many vertebrata from the lowest to the highest, and is the chief cause of supernumerary fingers and toes." (Evolution and Disease, J. Bland Sutton.) In place of involving the fingers it may involve the body of the hand, producing a rare deformity called cleft hand. C. N. Dowd, (Annals of Surgery, August, 1896,) considers the causes of these deformities conjectural, but thinks them probably due to mechanical effects on the hand of amniotic adhesions.

While this might be a plausible explanation of the cleft, it does not explain the fusion of the fourth and fifth metacarpal bones which exists in Dowd's case, as shown by the X-ray. No doubt the cleft is a developmental aberration as free from mechanical causes as is the fusion of the metacarpal bones.

Many congenital malformations are transmitted by heredity; many cases have no hereditary taint. In the case reported below the possessor of the deformity has two perfect children, and there is no trace of malformation in any of the relatives for one hundred years back, which is as far as they can be traced.

In Gould's Anomalies there is related an instance of a very numerous tribe of twenty-four fingered people in Arabia. Marriage was confined to the tribe. So strong was their belief in hereditary transmission that an infant born with a normal number of digits was sacrificed as being the offspring of adultery. These deformities may again disappear by intermarriage with normal individuals. When a deformity is once produced by some aberration in development or pathogenic influence on the embryo, it has a tendency to follow the law of nature, that like produces like under the same influences.

(Fig. 4.)

Suppression of Digits.—Gould has collected a few of the cases reported: Maygrier's case of a woman with one finger on each hand and two toes on each foot. Her two children had exactly the same deform-

ity. Her mother was perfect, but her father had only one toe. Kohler's case of suppression and deformity. Two professional dime museum cases, one with two, and the other with one digit on each hand. This list, of course, is not complete. The occurrence of suppression is much more rare than that of supernumerary digits.

Report of a case of the suppression of two digits and the presence of a supernumerary thumb on eaeh hand.

Fig. 4 is a reproduction of a photograph of the palmar and dorsal aspect of the right and left hands respectively, showing the appearance of the deformity. Male, aged 30; Chicago; weight about 130 pounds; height about 5 feet 5 inches. The hands are very useful and enable the man to do any kind of light work. There is a retardation of development of the lower half of the forearms. The styloid processes of the ulnæ are not well developed. Figs. 5 and 6.

The muscular development of the arms is more than that of an ordinary individual. The deltoid is as well developed and stands out as prominently as that of a Sandow. The humeri are of the same length—12 inches. The left forearm is one and a half inches shorter than the right, with incomplete extension at the elbow. The two thumbs on the left hand are webbed almost to their tips, but they make quite a useful member. Figs. 4 and 6 The nails are separate from each other. By reference to the X-ray (Fig. 6), it will be seen that the phalanges are also separate and that they articulate with an irregularly elongated mass of bone which represents the fusion of two metacarpal bones. This fused bone articulates with a fused trapezium and trapezoid. The metacarpal for the index finger articulates partially with the fused trapezium and trapezoid, but principally with the fused os magnum and unciform. The ring and little fingers are suppressed on both hands. The right thumb, as can be seen by reference to Figs. 4 and 5, stands at almost a right angle to the long axis of the hand. It can readily be seen (Fig. 5) that the articular surfaces are not in their normal relation to each other, which is due to a dislocation of sixteen years' standing as the result of playing ball. The supernumerary thumb on the right hand is a useless member and could be removed without in any way weakening the hand, and with very great improvement in its appearance. The dicotomy has originally extended, no doubt, entirely through the phalangeal and metacarpal bones of the right thumb, but ossification has taken place in the articulation at the base of the metacarpals, as can

(Fig. 5.)

be seen by the streak in the X-ray (Fig. 5), which marks the location of their ossification. The phalanges of the right supernumerary thumb stand at a right angle to the metacarpal bone, probably due to the contraction of the tissues forming its web. By comparing the length of the fingers (Figs. 4, 5 and 6), they might be considered to be the middle and ring fingers with a suppression of the index and little finger, but the difference in length is more likely due to a retardation of development of the middle fingers.

(Fig. 6.)

There are some good reasons for believing that this is not a case of supernumerary thumbs, but merely one of suppression and retardation of the development of digits. It might be regarded as being a case of suppression of the little finger on each hand with suppression of one phalanx of each index finger and retardation of development of the thumbs. The arguments in favor of this view are:

1. The carpo-metacarpal articulations. But referring to the X-rays (Fig. 7) of the normal hand, it can be seen that the proximal extremity of the metacarpal bone of the thumb articulates with one carpal bone, the trapezium and the metacarpal of the index finger. The second metacarpal articulates partially with the trapezium, but principally with the trapezoid. The third metacarpal articulates with the os magnum, while the fourth metacarpal articulates with the os magnum and unciform; the fifth with the unciform and the fourth metacarpal. The metacarpal bones also articulate with each other. By referring to the X-rays of the right hand (Fig. 5), it can be seen that the metacarpal of the supernumerary thumb articulates with the trapezium and its contiguous metacarpal; the second articulates with the trapezium and trapezoid, as does the index finger of the normal hand; the third metacarpal articulates with the os magnum, as does the middle metacarpal of the normal hand, while the fourth metacarpal articulates with the os magnum and unciform, as does the ring finger of the normal hand. These points of similarity between the metacarpo-carpal articulations are not so marked in the left hand, as will

be seen by referring to the X-rays (Fig.6), and the X-rays of the normal hand (Fig 7). Fig. 6 shows that there has probably been a fusion between the trapezium and trapezoid and the os magnum and unciform,

(Fig. 7.)

semilunar and cuneiform, with suppression of the pisiform.

2. The length of the metacarpal of the right thumb resembles the metacarpal of the index finger.

3. Before dislocation of the right thumb it stood parallel to the other fingers instead of at an angle with them, as the thumb normally does.

4. The relative length of the two fingers. In the normal hand the metacarpal bone of the middle is longer than that of the ring finger (Fig. 7.)

5. On the palmar aspect at the distal joint of the right thumb the folds are multiple, as can be seen by referring to Fig. 4. This is the normal condition of the first interphalangeal joints of all the fingers, while at the distal joints of the fingers as well as at both joints of the thumb the folds are single.

Finally, irregular dicotomy resulting in supernumerary digits is relatively frequent; suppression of fingers and fusion of bones are also frequent, while the suppression of one phalanx with the normal presence of the other two is exceedingly rare. This fact alone would throw the burden of proof on those who contend that this digit is a finger.

Summary of the points of interest in above case:

1. The occurrence of two separate and distinct processes of development in the same case; suppression and supernumerary formation.

2. Suppression of two fingers and the development of one supernumerary thumb on each hand.

3. The marked muscular development of the arms of a subject doing light work.

4. Retardation of development in the lower half of the forearms.

5. Fusion of the carpal bones. There are four carpal bones on the left and seven on the right side.

6. Complete fusion of the left metacarpal bones of the thumbs with ossification of the articular processes of the metacarpal bones of the right thumbs at their proximal extremity.

7. The normal length of the metacarpal bone of the right thumb.

8. Dislocation of the metacarpo-phalangeal articulation of the right thumb, not congenital.

9. Relation of the phalanges to the metacarpal bone of right supernumerary thumb, congenital.

10. The multiple creasing on the palmar aspect of the distal joint of the right thumb.

For the following data concerning another interesting case of a somewhat similar

character, I am indebted to my friends, Dr. Hoelscher and Dr. Oswald. The illustrations show the excellent result obtained from the operation by Dr. Oswald.

The subject of this brief description was an exceedingly precocious girl of ten years, referred to me by Dr. J. H. Hoelscher with the accompanying skiagraph, one of the early successful attempts in the Roentgen laboratory of Dr. O. L. Schmidt. The child was the youngest in the family, and no instances of similar developmental defects existed in any other member of the present generation, and no knowledge of remote heredity could be obtained. The child was in all other respects perfectly modeled.

An inspection of the skiagraph shows a condition of syndactylism of the first and second fingers, extending to a point opposite the second phalangeal articulation, the first finger somewhat poorly developed and a clawlike appearance. The middle and ring fingers are quite well developed and the small finger, with the corresponding metacarpus entirely absent.

There is also observed a curving and thickening of the metacarpus of the first finger at its carpal extremity, and a triangular hyper development of the metacarpal bone of the thumb in consequence of which the thumb could not be approximated to the first finger.

This condition constituted the principal

impediment to the usefulness of the hand, and an incision was made on the dorsal surface to the bone and a removal of a portion of the bone effected, enabling the thumb to approach the first finger. The web connecting the first and second fingers was divided by a dorsal and palmar flap, and after prompt healing of the wounds thus made, massage and constant effort on the part of the patient soon enabled her to secure a useful member. She was able a short time after to pick up a pin with the thumb and first finger.

A second skiagraph, taken after the operation, shows the appearance of the bone after a portion had been removed. This case, besides its interesting features form a morphological view, illustrates very forcibly the great value of the Roentgen ray in determining the exact surgical measures necessary to remedy defects of this character.

Typhoid Fever.

The season most prolific of typhoid fever being now at hand, the subject can not be well aired too much in the medical press.

Especially is this true at this time when the plague is so terribly descimating the ranks of our noble military defenders.

This great calamity, however much deplored, affords a lesson by contrast. The wretchedly poor management, disregard of sanitation with a sick roll of sickening dimensions, grossly imperfect treatment alimentation and nursing with its stunning fatality, shows by contrast with the most approved management such striking results in favor of the latter as to stimulate every sincere practitioner to attain the highest degree of proficiency in handling this really formidable disease.

The onset of disease being so insidious and there being so few clinical data on which to predicate a certain diagnosis much precious time is often lost that otherwise might be used to the patient's salvation.

The importance of some certain means of early diagnosis is greater where malaria abounds which is so apt to complicate and leave the attendant in doubt as to whether he is dealing with malaria—remitting or masked—or with typhoid or both.

As a rule he simply awaits developments and during the time, often a week or ten days, he treats symptoms. True, if he knew at the first visit he probably could not often abridge the duration of the illness, (though we have come to believe that this fete is occasionally performed) but, in most cases he could avert the danger phases which are prone to manifest themselves.

The Weidel test is the remedy for this shortcoming. And by the way, where are the fruits in the army of the boasted provision for all detail scientific work; even to bacteriology?

Every case not diagnosed with fair accuracy as something else, and revealing any possibility of typhoid should have the benefit of this test. Even an urban practitioner, not too remote from a center affording such facilities, can collect a drop of blood on a slide from the suspect, let it dry, and mail the slide to some confrere in the city who is prepared to make the test.

We do not say this test is infallible, but it is worth at least four of the grosser clinical indications, and, when reaction is positive there need be no doubt of the diagnosis, even though all other landmarks are absent and the patient still on his feet.

In treatment the indications to be met are well understood. The only question is; the best means?

What are the conditions most to be dreaded? Toxemia, intestinal hemorrhage and ulcer-perforation. High temperature, cardiac debility, delirum, sub-sultus, etc., are but results of toxemia. (This not invariably true of temperature) Tympanites, the results of decomposition of intestinal mucus and inflammatory products conjoined with vaso-motor paresis, the latter itself due to toxemia.

Then first of importance is to minimize toxemia. How? By purification early and continuous of the alimentary tract and sewer below. Start with fractional gr. doses of calomel, alone or combined with other antiseptics, frequently repeated, following in twelve or eighteen hours with saline regardless of diarrhoea or constipation.

Mild elimination is to be kept up throughout the progress of the disease. For this and for its antiseptic property the Woodbridge* formulae are valuable, preferably No. 2. It acts as a diuretic, too.

As antiseptic and alterative eudoxine is very efficient. This, a bismuth salt, united chemically with iodine over sixty per cent. of the latter and over thirty per cent. of the former; insoluable in the stomach, but the iodine freed by the alkaline intestinal secretions.

The sulpho-carbolates are likewise potential purifyers of the tract. We have long been familiar with that salt of zinc, but an improved combination is that of the sulpho-carbolates of zinc, lime and soda as exploited in the Waugh* Abbot tablet.

*No purpose in this to advertise any proprietary product. These are handy forms but any qualified pharmacist can compound the drugs.

One might do much worse, but he could not do much better, than to administer all three of the above named in rotation, each three hours apart.

The results generally is deodorization of the stools and expelled gas, lessening of decomposition and gas formation and reduced amount of sceptic systemic poisoning, with consequent avoidance of graver manifestations.

As to fever reduction one dislikes to give up an agent like phenacetin and other aniline derivatives which gives such prompt temporary results, but, it must be done when we realize that the subsequent effect on the vitality is as vicious as though our measure had been copious blood-letting. Reliance must be placed in cold applied externally, reserving though, on account of liability to shock, the low temperature tub-bath or the wet sheet ice pack to the cases which fail to respond to the milder means.

A most valuable reinforcement to the sponging of the body and ice coil to the head and ice bags to the abdomen, is ice water, following a cleansing enema, thrown well into the colon through a rectal tube. Let this ice water, say a pint, gradually increased, be the normal salt solution. To each pint add one half oz. of Listerine. Seek its retention and then note one to two degrees decline of temperature.

If hemorrhage should be going on too, or threatened, this close proximity of the cold to the seat of the ulcers can not be other than beneficient.

As to the accident of hemorrhage, before which, in some cases, we stand appalled and helpless, all resources failing, the chief reliance is to splint the bowels with opium, stilling peristalsis and lessing blood pressure. This is antagonistic though, to the eliminative antiseptic efforts and should be abandoned as soon as possible.

Stimulants.—Strychnine and spirits,—may be called for, the former to bolster up a flagging heart, or antagonize intestinal paresis; the latter to stimulate gastric function. For pulmonic and nephritic complications one must be on the alert.

The writer recently beheld a typhoid patient hurled to destruction in a urenic storm, acute nephritis intervening and its manifestations being mistaken for those of excessive typhoid toxemia, till, when the urine was examined and found nearly solid with albumen, it was too late and the victim in a few hours was ushered to her doom.

Turpentine, as an antiseptic, and perhaps other properties, often has a gratifying effect. But, if long continued, is apt to be detrimental to gastric function, the one thing that needs to be conserved.

Its use is best limited to the state of intense systemic poisoning revealed by the dry, brown coated and cracked tongue associated with much tympanites; but this condition need seldom be encountered if the case be seen sufficiently early and treated as here outlined.

Quinine has little or no place in the treatment except there be a malarial complication. For the collapse following hemorrhage, as well as from the all but impending dissolution due to extreme toxemia, most surprising and gratifying results, will sometimes follow the operation of hypodermoclysis or the infiltration of the sub-dermal cellular tissue with four to six or more ozs. of normal salt solution by means of a needle four to six times larger than a hyperdermic needle, attached to a fountain syringe.

A pint or a quart of the same solution may be thrown into the colon.

Standing in the somber shades of apparent impending death no practitioner does his whole duty if he leaves this measure untried.

Feeding is a subject for a whole article by itself, suffice it to say that correct alimentation including assimilation is perhaps of more importance than therapeutic measures. No case is ever properly managed without a trained or competent nurse. Contrary to his former opinion, the writer now believes that with early, vigorous and continuous antisepticising of, and gentle drainage through the intestinal tube conjoined with discreet alimentation and heat reduction by means of applied cold, the duration of typhoid fever is sometimes markedly abridged, and, in most cases, can be mitigated in severity so that extreme danger signals will not be hoisted.

S. J. McDermith, M. D.
503 Mack Block, Denver, Colo.

General Considerations on Septic Infection of Ovarian Cysts.

Dr. C. G. Cumston, at the recent meeting of the American Association of Obstetricians and Gynecologists, presented a paper with this title:

Inoculation experiments had shown that if the liquid contents of an ovarian cyst were not contaminated by bacteria, they would remain aseptic and would undergo no change. But if, on the contrary, microbes attacked a cyst and entered it, its contents would serve as excellent culture media and symptoms of infection would soon appear. But the human organism would take on the offensive and would re-act against the bacteria which had infected the cyst; leucocytes came from the

walls of the vessels and attacked the invading microbes, and thus we had the transformation into pus of the liquid contents. There were two kinds of septic infection of ovarian cysts, namely, pathogenic infection and saprophytic infection. Pathogenic and saprophytic organisms often entered ovarian cysts through puncture, incision and drainage. As puncture was discarded, in a great number of instances by the majority of the profession, it was clear that the patieut contained the agent of the septic process under consideration. The germs did not come from without, but from the interior of the organism, and the process might be called a true auto-infection, which took place in one of three ways: (1) By means of the blood, in which case the infection was direct, produced by phlebitis, which extended up to the cyst; or it might be indirect, in which case the infective elements were carried in the general circulation into the tumor by means of its pedicle. (2) Infection might take place by way of the lymphatics, in which case the lymphatic channels acted as the contaminating canals and allowed a direct introduction of the germs into the interior of the cyst up its hilum. (3) There might be infection through adhesions, which were plentifully supplied in new-formed vessels and which were intimately connected with those in the walls of the cysts, and thus allowed an easy transportation of the bacteria. After giving, at considerable length, the symptoms of ovarian cysts, aud dwelling upon the diagnosis and differential diagnosis, the author dealt with their operative treatment. Operation for the removal of ovarian cysts which were the seat of septic infection might be divided into four stages. The first was incision of the abdomen; the second, the breaking up of the adhesions, and ligation of blood-vessels which they contained, and then the pus might be removed by trocar and not with the knife, because if the cyst was incised pus would immediately flow out and the wound would very likely became infected by the septic material. The third step in the operation was the extraction of the cyst through the wound, and in doing this the surgeon should be careful to avoid infecting the abdominal incision at the time he was drawing the pocket through, but this complication could be easily avoided if aseptic gauze sponges were tightly packed around and inside the line of incision. Next came the ligation of the pedicle and its section, after which it was dropped into the abdomen. The fourth step in the operation consisted in the cleansing of the peritoneum, which should be done with great care, especially when the operative field had run any chance of infection. If this had occurred, free irrigation of the peritoneum was proper, but it should be done with care, and the liquid employed should be a warm decinormal salt solution. Care should be taken to limit the irrigation to the subumbilical portion of the peritoneal cavity, and a back flow of the liquid toward the diaphragm should be prevented by having the operating table perfectly flat and the thorax slightly raised.

Medical Hemorrhage.

Dr. Frederick J. Smith recently read an interesting paper on this subject before the Hunterian Society of London. Under this title he includes the following cases: (London Lancet.)

All intracranial hemorrhages not due to violence; hemorrhages appearing from the mouth or nose, as "spitting or bringing up of blood;" epistaxis of youth or old age; bleeding from spongy gums or pharyngeal varicose veins; aneurism of the aorta; hemorrhage from the lungs in bronchitis, pneumonia, phthisis, emphysema, malignant disease; hemorrhage from the stomach or duodenum; hemorrhages appearing from the anus either as blood or melæna, or in typhoid fever and other forms of ulceration—*e. g.*, tuberculous or dysenteric; gastric hemorrhage if not vomited; hemorrhage from piles, internal and external; hemorrhages appearing from the urethra, as blood in the urine; from bladder or kidney, from the vagina in women, metrorrhagia, menorrhagia, or postpartum hemorrhage; and subcutaneously—purpura, idiopathic or rheumatic, etc., and scurvy. A mixed class of cases is due to serious disease—leucocythæmia, acute yellow atrophy of liver, some other forms of blood poisoning, and hæmophilia. This list, probably incomplete, is sufficient to show how important and frequent is that loss of blood which may be termed medical. After discussing the use of ergot and other agents generally used, Dr. Smith concludes his article with the four following propositions: 1. That most cases of medical hemorrhage cease spontaneously and are essentially not dangerous to life from loss of blood. 2. That active treatment by ice bags and ergot frequently defeats its own purpose; if the bleeding ceases it does so in spite of treatment. 3. That where experience of morbid anatomy or the profuseness of the blood loss makes an arterial source certain, ergot is distinctly contra-indicated. 4. That complete rest, opium and iodide of potassium are our most powerful and most trust-

worthy agents for the emergency, except in certain special cases—*e. g.* from the stomach—where additional treatment by astringents should be applied.

Gastric Tetany.†

Sievers relates two cases of tetany complicating gastric dilatation:

1. A girl, aged twenty-one, was known to complain of discomfort in the epigastrium for a week. This was followed by vomiting and then by tetany on the next day. She was admitted moribund. The hands and feet were involved, and there was opisthotonos but no trismus. Death occurred in three-quarters of an hour from respiratory failure. At the necropsy the pylorus was much narrowed by the cicatrisation of two ulcers, and the stomach was greatly dilated.

2. A woman, aged forty-two, had suffered for many years with gastric symptoms, but had been much worse during the past five years. There had been pain, acid eructations, and vomiting, but she continued to work until the day before admission. During the following night there was pain in the limbs and tetany appeared. On admission she was found to be much wasted. The neck and trunk muscles became involved as well as the limbs, and later the facial and jaw muscles. There was a trace of albumen in the urine. Death occurred from respiratory failure within twenty-four hours of the onset of the tetany. At the necropsy there was marked gastric dilatation as the result of the cicatrisation af a small gastric ulcer.

Gastric tetany is rare. In Finland, where gastric dilatation is common, only four cases of this form of tetany, including the above cases, are known to the author. It has been attributed to desiccation of the tissues and to reflex irritation. Frankl Hochwart even suggests that tetany may be an infective disease. At present autointoxication is the most usually-accepted cause. In gastric tetany authorities have, at times, quite failed to isolate a convulsive poison. Bouveret and Devic attempted to show that gastric tetany was a complication of hyperchlorhydria. They induced convulsions in animals by injecting an alcoholic extract of the stomach contents from a case of this kind. Sievers then gives short details of twenty-seven fatal cases of gastric tetany collected from the literature of the subject. In most cases the dilatation was due to the cicatrisation of an ulcer, and therefore hyperchlorhydria was probably present. In some cases there has been no such cicatrised ulcer, and in other cases there was presumably no hyperchlorhydria, as, for instance, in Blazicek's case, where an enlarged gall bladder pressed on the duodenum. In three of the twenty-seven cases above referred to, a simple ulcer was complicated by carcinoma. On account of the exceptions met with, Sievers thinks that Bouveret and Devic's explanation is unsatisfactory. The reason why tetany more often complicates gastric dilatation due to a cicatrised ulcer may be that in these cases the dilatation and retention of the stomach contents are most marked. The author's paper is abundantly illustrated from the literature of the subject.

†Abstract of an article in the British Medical Journal.

The Renal Role in Diabetes.

The discovery some time ago that phlorizin would produce artificial diabetes awakening the hope, openly expressed by many, that at last some explanation of the immediate etiology of the disease would be found. A discussion at the *Verein fur Innere Medicin* at the April meeting would not seem to encourage this hope much. Experimental evidence seems to show that in phlorizin diabetes it is the kidney that is at fault; and so reversal of opinion somewhat in the direction of the old opinions as to a kidney diabetes seems imminent.

A very interesting set of experiments were reported by Dr. Marchuso, which would seem to demonstrate not alone the kidney function in the matter, but also to indicate precisely what special part of the urinary secreting apparatus is at fault. Milk-sugar, it is well known, when injected into the circulation, is excreted as such, the system being unable seemingly to make any use of sugar in this form for any of the nutritional processes that are accomplished in the circulation. If Haidenhain's ligature of the renal arteries, however, be made, then the milk-sugar fails to appear in the urine; but if now phlorizin be given the animal the milk-sugar begins at once to be excreted. As Haidenhain's expedient practically shuts off the glomeruli from any share in any action of the kidney that may take place, it would seem as though it was some influence of the phlorizin upon the cells of the urinary tubules that led to the excretion of the sugar. Experimentally it can be shown by the iron-chloride reaction that phlorizin is present in the cells of the urinary tubules some time after its ingestion, and its presence would seem to result in that lowering of their function which allows the passage of sugar. This, of course, is to revert to an old theory and makes the

etymology of diabetes from *diabaino* "to go through," true once more.

The whole subject of diabetes is gaining very greatly in interest in Europe. More exact diagnostic methods have shown that slight forms of diabetes are much more common than was thought some time ago. Then, too, all the great clinicians are agreed that the disease is not only relatively, but absolutely more frequent than it used to be, and the conjugal form of the disease in which it attacks both husband and wife has attracted a good deal of attentiou, as possibly pointing to an infectious element in the disease. There are even those who assert that the modern liking for sweets has so reduced generally the power of metabolism for the carbohydrates that the limits of alimentary glycosuria are lower than they were, and the tendencies to diabetes much more outspoken.

Gynecological Axioms.

The following gynecological axioms by Augustin H. Goelet, M. D., quoted from the New England Monthly, are worthy of thoughtful consideration:

1. Never expect curettage alone to cure endometritis. It is only a preliminary expedient. 2. Never curette the uterus except under the strictest aseptic precautions in every detail, which includes shaving the pudendum. 3. Never use the sharp curette except at the internal os and in the cervical canal, or to remove cancer tissue. It is both unnecessary and unwise. 4. Never attempt to remove the entire endometrium down to the muscular structure. If this is done, scar tissue will supplant the mucous membrane. Is that the result desired? 5. Never curette as a routine measure, but always for a definite purpose; and be sure it is necessary. 6. Never forget that it is possible to do great damage with the curette, even perforate the uterine wall. 7. Never curette at the office and permit the prtient to go home. It is dangerous and inflicts unnecessary suffering. There are other reasons that are self-evident. 8. Always explore the uterine cavity with the finger or the uterine speculum before or after curettage or both, to insure perfect work. The expert may occasionally omit this, manipulation with the curette affording him sufficient information. 9. Never pack gauze into the uterus as a routine measure. It should never be done unless there is some practical reason for it. Every case does not require it, and in some instances it is positively contraindicated. 10. Never permit gauze to remain in the uterus longer than twenty-four or at most forty-eight hours. It ceases to drain by that time, and the secretion will accumulate above it. 11. Never insert fresh gauze into the uterus until the cavity has been thoroughly irrigated to remove clots, loosened debris, mucus, and sometimes pus which has collected above and around that which was removed. 12. Always continue the irritation of the uterine cavity, even after discontinuing the gauze, as long as there remains anything to be washed away or until a complete cure has been effected. 13. Never attempt to make an intra uterine application with a cotton-wrapped applicator. This medication will not reach its destination, and the application is uncertain and dangerous unless done through a uterine speculum which protects the cervical canal. 14. Never apply pure nitric acid, strong tincture of iodine or other caustics to the uterine cavity. It is unnecessary, harmful, and barbarous. There is nothing gained by it. 15. Make all medicated applications, suitably diluted, to the interior of the uterus through a double current irrigator, and permit the excess to drain away before the instrument is drawn. This is definite, certain, and effective.

The Surgery of the Kidney.

Henry Morris (The Lancet) concluded a valuable paper as follows:

1. That the aim of the surgical treatment of renal calculus should be to extend the application of nephrolithotomy and thereby restrict the necessity of nephrotomy and nephrectomy. 2. That more frequently than not the failure to find a stone is not in reality a failure of treatment, because there are so many curable morbid conditions which mimic renal calculus and which are discoverable only by exploration. 3. That the theory that a stone in one kidney, whether that kidney is itself painful or not, reflects or transmits pain to the opposite kidney is quite unproven; that it is a dangerous theory, calculated to lead to very erroneous practise, and that the surgical principle with regard to exploratory operations should be that with pain, paroxysmal or continuous, on one side only, the kidney on the painful side should be explored. 4. That nephrectomy for calculous conditions is very rarely called for and should be done only in most exceptional cases. Nephrotomy for calculous pyonephrosis is the proper operation, because of the frequency of double calculous disease. Experience has shown that kidneys from which stones weighing 830 grains and 1300 grains have been removed are functionally sufficient to maintain life during the blocking of the ureter and the suspension of the function of

the kidney of the opposite side. 5. That nephrectomy whilst the opposite organ is occupied by calculus is fraught with very great danger to life; whereas nephrectomy after the opposite kidney has been freed from stone will probably be followed by recovery from the operation and possibly by very good health for years afterward. 6. That when renal calculus causes reflected or transferred vesical or ovarian pain, the removal of the calculus will be followed by complete cure of the bladder or ovarian symptoms. 7. That in some cases renal calculous conditions are attended by very remarkable nervous symptoms, sometimes with, sometimes without, high temperature, and that information as to the cause of these symptoms is needed. 8. That unsuspected renal calculi are a source of very real danger to their possessors, and when, whether by accident or by the systematic examination of the urine, we have cause to suspect the presence of a calculus we should recommend its immediate removal regardless of the fact that it is not causing renal or transferred pain. 9. That quiescent calculus is as dangerous to the individual as unsuspected calculus and ought to be removed by operation. 10. That the hitherto accepted teaching that a renal calculus, if causing only mild symptoms or attacks of renal colic of only recent occurrence should be treated on the expectant plan ought to be discarded as unsound in theory and dangerous in practise. 11. That the same principle should be applied to renal calculus which has long been the rule in regard to vesical calculus —namely, when suspected it should be searched for, and when known to exist, removed, without waiting in the hope that it may become encysted or spontaneously expelled. 12. That the very low mortality of nephro-lithotomy puts this operation upon the same footing for renal calculus as lithotrity in the most experienced hands for vesical calculus.

Shall We Operate or Not in Malignant Disease?

The British Medical Journal, in one of its recent issues, asks this question. A recent discussion at the Royal Medical and Chirurgical Society, and the publication of an important work by Dr. Severin Robinski, have attracted interest afresh to the matter. Perhaps the first point that requires elucidating in attempting to answer the question is that which concerns itself with the nature of malignant disease generally, and of epithelial growths more particularly. Two theories have been, and still are, held as to the essential nature of cancer: First, the embryonic theory; Second, the parasitic theory. In support of the former are many sound observations. That an adult, fully developed cell can revert to an earlier and more primitive form, and thereby give origin to a tumor, seems beyond dispute; and that embryonic remnants are found in fully matured organs has been distinctly proved by the elaborate observations of Malassez, whose *debris epitheliaux paradentaires* in the gum, form the starting points of tumors of the jaw; and by Klein, who has observed in the healthy normal testicle, remnants of the Wolffian body, which are very possibly the points of origin of some forms of testicular growths. But though these arguments and observations are interesting, and not without import, the embryonic theory is wholly insufficient to account for all the protean manifestations of cancerous disease.

The more fascinating, and probably the more correct, theory of malignant disease is the parasitic. Investigations bearing upon this began practically with Nepveau in 1872. This observer asserted that microbes were present in epitheliomata. In 1885 Morau found that an epithelial growth in a white mouse caused cancer in eight white mice out of ten upon whom he performed inoculations; and some instances, sufficiently well authenticated, would seem to indicate the possible transference of cancer from the uterus to the penis. In 1887 Scheurlen laid claim to the discovery of a specific organism of cancer, but his researches lacked corroboration. Then followed the observations of Virchow and others on the protozoa in human tumors; and in 1890 Russell described fungi which he had found in cases of epithelioma, and Banti recognized the same or similar bodies in Paget's eczema. In 1895 Sanfelice and Roncali of Rome published observations upon the connection of blastomycetes with cancer. Blastomycetes have been found by them in and around the cancer cells in the periphery of a cancer mass; they have been cultivated in acid solutions (this point is of great interest and importance), and have been inoculated and have produced, in animals, tumours correspondig to those from which they were originally derived. The forms of blastomycetes observed are not the same in all cases. Sanfelice describes a "saccharomyces lithogenes" and Roncali a "blastomyces vibro-simile degenerans" names which indicate the characteristic properties of the fungi.

If we assume, for the sake of argument, that cancer is, in at least some, if not all, cases, parasitic in origin, then there must, unquestionably be a time when the growth

is localised at the point of inoculation, and, if so localised, there can be no doubt that early operative and radical removal is a means of cure, so far at least as that inoculation is concerned. Robinski's statement that operation is not justified in cancer must therefore be decidedly and strenuously negatived. It lacks the smallest shred of evidence or observation, clinical or experimental, to support it. The local deposit of cancer is diffused, as we know, mainly through the lymphatic system. If, then, cancer is at first local and becomes constitutional by diffusion through the lymphatic system, it is further necessary that the complex system of the lymphatics should be studied with greater accuracy than heretofore. What Heidenhain has done for the breast, and what Kuttner has more recently done in the case of the tongue, by exhaustively describing and most graphically delineating the lymph vessels and glands, must be done in an equally thorough manner elsewhere. With a wide local removal and a clearing away of lymph channels and glands based upon such investigations, we should then logically expect to attain more permanent results in the treatment of cancer. That treatment, carried out, so far as our present imperfect knowledge permits us, upon these lines has justified the anticipations which were held out, is beyond dispute. The careful work of Watson, Cheyne and Halsted has proved conclusively that intelligent operations, such as these, are attended with no greater immediate mortality, and are followed by a very much longer duration of life in a larger proportion of cases.

The question, then, as to the propriety of the use of the knife in malignant disease, can be considered permanently settled. Our efforts must now be directed to a close study of the earliest manifestations of malignant growths in their various sites, and to a laborious and exhaustive investigation of the intricate lymphatic channels. With knowledge thus perfected we can, until the day of inoculation arrives, feel justified, nay, rather compelled, to advocate the most prompt and intelligent active surgical interference in all cases of accessible malignant growth.

The Treatment of Gastric Ulcer by Large Doses of Bismuth.

Gastric ulcer has been treated by very many methods, some of which radically differ from one another, and the use of bismuth in this affection is by no means recent. Within the last few years, however, says the Therapeutic Gazette, it has been suggested by Fleiner that good results follow the use of massive doses of this substance. This clinician employed as much as 300 to 450 grains of bismuth in suspension in water, poured into the stomach by means of a stomach-tube after previous lavage, and in his paper he referred to the experiments of Mattheys upon the action of bismuth in hastening the cure of experimentally produced ulcers in the stomachs of dogs.

At a recent meeting of the Manchester Therapeutical Society, Dreschfeld read a paper upon this subject in which he protested against the use of the stomach-tube as a method of administering these large doses of bismuth, on the ground that it is not wise to pass a tube into an ulcerated stomach. He stated that he had employed from thirty to fifty grains of bismuth subnitrate three times a day, suspended in water, and swallowed without the aid of a tube. Under these circumstances he found the condition rapidly relieved, vomiting ceased and digestion improved, although he allowed light nitrogenous food, such as fish or fowl, to be given. Ultimately the ulcer healed. These large doses of bismuth have never, in his experience, produced constipation, but rather a slight tendency to pain and diarrhœa. Dreschfeld has also found this method useful in both acute and chronic cases, and also in acid dyspepsia with neurasthenic condition.

Albuminuria Complicating Gynæcological Operations.

Dr. R. B. Hall (Medical Record, October 1, 1898) at the American Association of Obstetricians and Gynæcologists urged careful examination of the urine preceding operation, so as to determine if possible the presence of nephritis or other causes leading to suppression. The most common cause was a pre-existing nephritis, but unfortunately in granular nephritis a most careful examination of the urine might fail to show the presence of the disease. One of these patients, after the operation might have suppression followed by coma and death. The speaker said that we might also have suppression following operation in a patient with a fatty heart, or with atheromatous arteries. He considered it of the greatest importance to have the patient thoroughly prepared for operation. If he found the least indication of pre-existing nephritis, he advised chloroform for the anæsthetic, regardless of the age of the patient. In his early operative work he used ether almost exclusively. He cited a hundred and ten sections in which ether

was given. In thirty-three cases there was a trace of albumin in the urine in the first twenty-four hours. In ten cases there was partial or complete suppression, and two patients died in coma. During the time he had used the ether, he had operated on 7 patients known to have nephritis. They were given chloroform and were included in five hundred sections in which that drug was the anæsthetic. Eighty-five of this number showed a trace of albumin in the urine in the first twenty-four hours after the operation. Ten patients had suppression and four died of uræmic coma. All patients who were known to have kidney disease were given chloroform. There were thirty-five, and the deaths in the chloroform list were from this number. To avoid the dangers from the use of chloroform, the speaker urged that its administration be intrusted only to one expert in its use. He closed the paper with a *resume* of the preliminary treatment he accorded every patient about to be subjected to a section, of the manner in which he conducted his operations, and of the measures he employed if albuminuria occurred following the operation.

Shall We Operate Through the Upper or Lower Canaliculus?

S. C. Ayres, M. D., Cincinnati, O., read a paper of unusual interest at the Cleveland meeting of the Ohio State Medical Association. He said:

There seems to be quite a diversity of opinion among writers as to which canaliculus it is better to open in operations for dacryocysto-blennorrhœa and strictures of the nasal duct. It is a question with two sides to it, and authors seem to have paired themselves in favor of the upper or lower along lines apparently dictated by their experience. Is the one as good as the other? If so the question is settled in favor of both and honors are easy. Is one better than the other one? If so, which one? If one is better than the other why not know it and settle the question in favor of the better one?

Stellwag says: "To gain entrance to the sac the lower canaliculus is usually slit up. Some, however, perfer the upper. In favor of the latter is the fact that continued probing, as is necessary in the treatment of lachymal blennorrhœa, by great tension of the inner angle, readily causes cicatricial closure of the inner end of the tube, and it is *most important* to preserve the permeability of the *lower canaliculus* as this acts the principal part in the conduction of tears.

If this be true, why should so skillful an operator overlook this fact and slit the lower canaliculus and illustrate his work accordingly? We give a few specimens from some of the text-books. Meyer: We begin by opening the inferior lachrymal passage. Schmidt-Rempler: When employing Bowman's Probes it is immaterial whether the upper or the lower canaliculus is used. Schweiger: The lower canaliculus. Noyes: My preference is for the lower. Brudinell, Carter, Juler, Swansey, Berry and Roosa the lower. De Schweinitz describes the operation through the lower, but says either can be used. Norris and Oliver, either upper or lower, but illustrate operation through the lower. Fuchs says that the operation can be preformed through either upper or lower but states in sounding through the lower canaliculus the sound must be tilted so as to be turned through *more* than a right angle, but the canaliculus is wider.

Wells says: "I am in the habit of dividing the upper canaliculus with Weber's knife and passing the latter into the sac and freely incising the neck." De Wecker says any treatment adopted should disturb the physiological functions of the tear passages as little as possible. I always prefer to commence with the superior canaliculus, which plays an important part physiologically.

Mr. W. Spencer Watson, in a Brochure on the Anatomy and Diseases of the Lachrymal Passages, says: "In view of the fact that the tears gravitate toward the lower oculo-palpebral sinus, the part performed by the lower punctum is much more important than that of its fellow in the upper lid. Any abnormality of the lower punctum affects the passages of the tears to a much greater extent than similar disturbance of the upper one, and it therefore follows that the consideration of affections of the lower punctum is predominant and its treatment more essential," A rew pages farther on in speaking of the operation for chronic dacryocystitis he says, "the lower canaliculus should be laid open by means of the Weber's or Bowman's knife." The statement about the functional value of the lower punctum and his method of operation appear inconsistent. If "any abnormality of the lower punctum affects the passages of the tears to a much greater extent than a similar disturbance of the upper one," why does he produce this abnormality by slitting the lower canaliculus? A canaliculus that has been slit is never absolutely normal again even if it performs its functions in a quite satisfactory manner.

The mass of authority among the book writers is in favor of slitting the lower canaliculus for strictures of the nasal duct,

and lachrymal blennorrhœa. The question as to which is the better one to open is scarcely discussed at all by the authors. It seems to be a settled question in favor of the lower one. It seems to the writer that

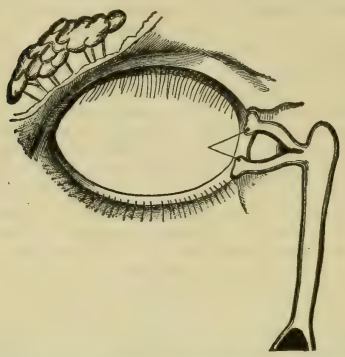


Fig. 1. (After Gray), showing the anatomy of the tear-sac.

the question is open to discussion with some strong arguments in favor of slitting the upper canaliculus.

The lower canaliculus is shorter and has a larger caliber than the upper one. It is more easily probed and can be incised with much less difficulty than the upper one. In making the ordinary stricture operation, after slitting the canaliculus the probe is introduced until it comes in contact with the bony wall of the tear sac and it is then deviated at least 90 deg. and sometimes more before it can be passed down into the duct. (See Fig. 2.) This necessarily causes considerable twisting of the tissues around the probe, especially if a Bowman's probe No. 6 or No. 8 is used. This makes it difficult to pass the probe and increases the pain. If in order to admit the probe the mouth of the sac is notched below it is apt to be followed by cicatrization afterwards which will interfere with its caliber. But the most important reason is that the lower canaliculus is more important for drainage than the upper one. It is larger than the upper one because it has more work to do. The constant winking of the upper lid sweeps the mucus on the surface of the cornea directly into the mouth of the lower canal. Let the lower canaliculus be obstructed or averted, and how quickly does the eye suffer.

The same effect would not follow a similar disturbance in the upper canaliculus. In the operation through the upper punctum the slitting of the canaliculus is probably slightly more difficult than that of the lower. The tubercle of the punctum is not so prominent and when the lid is on the stretch by drawing it tense against the upper rim of the orbit, it is not so firm as the lower one when it is drawn tightly over the lower rim of the orbit. But this difference is in-

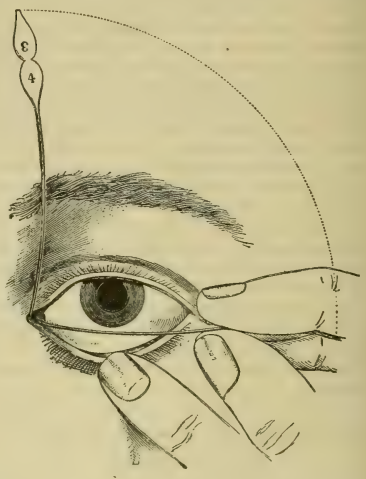


Fig. 2. After Norris and Oliver, showing the sweep of the probe when introduced into the lower canaliculus.

significant and should not be considered in comparison with its advantages. When the upper lid is drawn tense for the purpose of slitting the canaliculus it makes about an angle of 45 deg. with the tear duct. So that the probe in entering the tear sac does not have to be turned more than 45 deg. to enable the operator to push it down into the duct. (See Fig. 3.) It does not have to be raised more than half as far as when the operation is made through the lower canal. Another advantage is that there is not nearly so much twisting of the tissues around the probe as in the lower operation, and the probe glides down more smoothly.

In addition to this, when it is desirable to notch the mouth of the tear sac the knife, as soon as it has slit the canaliculus, can be elevated and pushed directly down into the sac and its neck enlarged before the knife is withdrawn. This will facilitate the passage of the probe very much. The secret of an easy and successful tear sac operation depends upon having an opening into it sufficiently large to allow a good sized probe to be introduced without much

twisting and compression of the surrounding tissues.

Treatment of the tear sac by injections is easier through the upper than the lower canaliculus. The fluids injected pass more readily down to the nose and also accumulations in the sac can be more easily pressed out by the patient.

The question of the size of the probe to be used in the operation is also one on which there is much diversity of opinion. Some authors never recommend a probe

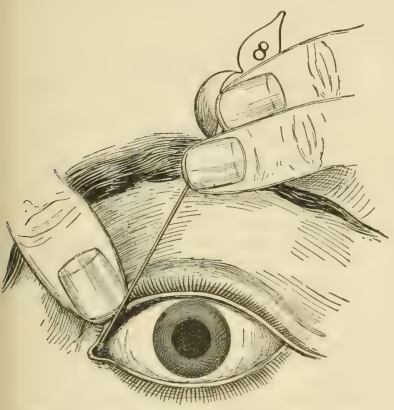


Fig. 3. Showing the probe introduced into the upper canaliculus. The sweep of the probe is only half as great as in Fig. 2, and the twisting of the tissues relatively less.

larger than Bowman's No. 3, or No. 4; others begin with No. 6, and again there are advocates of large probes at first, increasing to No. 16. The introduction of a small probe, No. 3 or No. 4, is more difficult in the ordinary run of cases as well as more dangerous than No. 6 or No. 8. This statement may seem paradoxical but it is practically true. A small probe is liable to pierce the mucous membrane and make a false passage. This is especially the case when operating on an acutely inflamed tear sac in the suppuration stage. The larger probe, and especially the olive pointed probe, separates the mucous membrane as it is pushed down into the lumen of the bony portion of the duct and thus is less liable to make a false passage. My preference is decidedly for the olive pointed probe in the first treatment. It is easier to introduce than the Bowman probe for the reason just stated. Later on when one wants to dilate the duct and to get the effects of the caliber of the probe by leaving it in for a few minutes, the Bowman probe is better. I generally begin with a No. 8, olive pointed. If I cannot introduce this I try a smaller one. If I can pass it I at once try to pass a No. 10, and rarely ever use one larger.

Medico-Legal Aspects of Gonorrhœa.

"Medicine," in one of its recent issues, publishes the history of an interesting case of this character originally described by Breslau of Germany:

A man was charged with having communicated gonorrhœa to a young girl with whom he copulated. She prosecuted him under the German code which punishes an injury to the health of another. The defendant admitted that he had had gonorrhœa several years previously but claimed that he was healthy at the time of his relations with the young girl. The charge against him was based chiefly on the affidavit of the family physician of the young girl. The attorney for the defence moved the rejection of this affidavit on the ground that it was not based upon a microscopic examination. The court chose Dr. Neisser as expert and submitted to him the following questions:

First, Can gonorrhœa be established with certainty other than by a microscopic examination? Second, How long may gonorrhœa manifest itself after infection in women? What is the extreme period when an affected person can fail to be fully acquainted with his state? Third, Was the disease of the complainant gonorrhœa due to an infection? Fourth, Had the accused still gonorrhœa when he last copulated with the complainant? Neisser rendered the following replies:

A skilful physician may diagnose gonorrhœa from the clinical symptoms, but the procedure is subject to grave error. The microscope procedure is alone of forensic value. The second question cannot be answered, for lack of data except in a general way. The symptoms and progress of the disease vary according to the seat of infection and method of propagation. Neisser, however, expressed the opinion that he could not accept the prevalent view of the lesser virulence of old gonorrhœa. The third question he did not have sufficient data to answer. As to the fourth question, he was led to believe by examination that the accused was still infected at the time when he last slept with the complainant. There had been found the remains of a gonorrhœa and gonococci The accused had not contracted any new infection since the relations with the complainant. Nothing, however, showed that the defendant had a knowledge of his morbid state, and he appeared to have acted in good faith.

Annual Meeting.

The Tenth Annual Meeting of the Tri-State Medical Society of Alabama, Georgia and Tennessee, will be held in Birmingham, Tuesday, Wednesday and Thursday, October 25th, 26th and 27th. The prospects are for a large and successful meeting. The following is a partial list of papers:

President's Address. J. A. Goggans, Alexander City, Ala.

"Modern Treatment of Corneal Opacities, with report of Cases"—M. L. Heffelfinger, Huntsville, Ala.

"Keratitis."—A. A. Greene, Anniston, Alabama.

"The Surgical Treatment of Trachoma."—S. Kirkpatrick, Selma, Ala.

"Purulent Ophthalmia; A New Method of Treatment."—Frank Trester Smith, Chattanooga, Tenn.

"Color Blindness."—H. S. Persons, Montgomery, Alabama.

"Eye Affections in General Diseases."—J. L. Minor, Memphis, Tenn.

"Treatment of Affections of the Singing Voice," Richmond McKinney, Memphis, Tenn.

"Syphilis of the Nose"—S. L. Ledbetter, Birmingham, Ala.

"Diphtheria."—H. L. Appleton, Cedar Bluff, Ala.

"Diphtheria."—W. D. Travis, Covington, Georgia.

"A Case of Addison's Disease Treated with Adrenal Extract."—H. A. Moody, Baily Springs, Ala.

"Suggestion in the Healing Art."—E. T. Camp, Gadsden, Ala.

"Chorea."—S. W. Fain, Chattanooga, Tenn.

"Neurasthenia and its Treatment."—Charles E J. Smith, Atlanta, Ga.

"Recent Advances in the Treatment of Gonorrhœa."—F. Goodwin Dubose, Florence, Ala.

"The Treatment of Intestinal Obstruction and Constipation by Electric Injections."—R. P. Johnson, Oak Park, Ill.

"Perfection of the Aseptic Technique."—W. F. Westmoreland, Atlanta, Ga.

"Curettage of the Uterus."—John G. Clay, Thompson's Station, Tenn.

"Extirpation of the Pancreas."—H. Berlin, Chattanooga, Tenn.

"A Few Remarks on Bone Surgery."—M. Goltman, Memphis, Tenn.

"A Simple Operation for Hemorrhoids, without Injections, Ligature, Clamp, Cautery, or Crushing."—R. R. Kime, Atlanta, Georgia.

"Peritonitis; Report of a Case."—D. S. Middleton, Rising Fawn, Ga.

"Urinary Calculus—Supra Pubic Cystotomy: Report of a Case."—James S. White, Franklin, Tenn.

"Supra Vaginal versus Vaginal Hysterectomy."—Clement Ritter, Selma, Ala.

"Extra Peritoneal Shortening of the Round Ligaments in the Correction of Retro-Displacements of the Uterus."—M. C. McGannon, Nashville, Tenn.

"Acute Anterior Poliomyelitis."—E. D. Bondurant, Mobile, Ala.

"Early Diagnosis of Cancer of the Uterus."—Thomas S. Cullen, Johns Hopkins Hospital, Baltimore.

"Surgery of Typhoid."—Harvey W. Cushing, Johns Hopkins Hospital.

"Membranous Colitis"—Louis W. Johnson, Tuskegee, Ala.

"Organic Disease of Mitral Valve."—J. T. Seay, Fern Bank, Ala.

"Lobar Pneumonia, with Treatment."—J. U. Ray, Jr., Blocton, Ala.

"Fevers of Alabama."—Chas. McAlpine Watson, Florence, Ala.

"Some Fevers of St. Clair County, Alabama."—Eugene P. Cason, Ragland, Ala.

"A Fever Indigenous to the Cumberland Plateau."—N. H. French, Wartburg, Tennessee.

"Continued Malarial Fever of Southeast Alabama."—Wm. R. Belcher, Daleville, Alabama.

"Malaria."—W. H. Bell, Oxford, Ala.

"Some Malarial Manifestations."—J.N. Pearson, Florence, Ala.

"Typhoid Fever."—E. A. Mathews, Clanton, Ala.

"Typhoid Fever."—E. Eugene Mitchell, Oneonto, Ala.

"Typhoid Fever."—S. W. Welch, Alpine, Ala.

"Typhoid Fever; Report of Cases."—C. L. Guice, Harris, Ala.

"The Treatment of Typhoid Fever."—Julius Jones, Rockford, Ala.

"A Rational Treatment of Typhoid Fever."—Gaius R. Johnson, Marion Ala.

"Typhoid Fever."—G. Manning Ellis, Chattanooga.

"Typhoid Fever."—W. H. Moon, Goodwater, Ala.

"Some Interesting Cases of Laparotomy."—C. Hamilton, Rome, Ga.

"Laparotomy for Gunshot Wound of Abdomen; Report of Case with Unique Features."—R. E. Fort, Nashville, Tenn.

"Puerperal Eclampsia."— Thos. F. Moore, Linwood, Ala.

"Some of the Emergencies of the Lying in State."—David A. Morton, Boaz, Ala

"Puerperal Septicemia."—Robt. B. Stapleton, Dotham, Ala.

"A few Remarks on the Treatment of

Puerperal Fever, with Illustrative Cases."—J. C. Johnson, Glen Allen, Ala.

"Hypodermic Medication."—E. P. Nicholson, Valley Head, Ala.

"Communal Hygiene."—Earnest B. Sangree, Nashville, Tenn.

"Two Cases of Surgery."—S. W. Purifoy, Lownesboro, Ala.

"Functional Impotence."—W. H. Mangum, Georgiana, Ala.

"Syphilis of the Nervous System with Report of Cases."—W. J. Love, LaFayette, Ala.

"Disobedience to the Mandates of Nature is Treachery of a Suicidal Tendency."—P. G. Trent, Sr., Roanoke, Ala.

"Animal Heat."—W. S. Edwards, Gadsden, Ala.

"Two Interesting Cases of Sun Stroke."—J. W. Ash, Springville, Ala.

"A Case of Complete Obstruction of the Common Bile Duct by a Floating Gall Stone. Operation; Immediate Recovery; and Restoration to Perfect Health. A Short Study of Gall Stones in the Common Ducts."—W. H. Hudson, LaFayette, Ala.

"Scarlet Fever and its Sequelæ."—Jno. Thos. Chapman, Selma, Ala.

"Smallpox."—Frank Prince, Bessemer, Ala.

"Smallpox in Alabama."—G. B. Wimberly, Reform, Ala.

"The Treatment of Burns on Modern Surgical Principles."—C. B. Jackson, Horse Creek, Ala.

"The Treatment of Fractures by Plaster Paris Bandage."—M. B. Cameron, Sumpterville, Ala.

"Some Suggestions in the Treatment of Typhoid Fever."—J. C. LeGrand, Birmingham, Ala,

"Typhoid Fever."—J. D. Gibson, Birmingham, Ala.

"Ectopic Gestation."—W. E. B. Davis, Birmingham, Ala.

"The Management of the Puerperal State."—C. C. Jones, East Lake, Ala.

"Fracture of the Spine; Presentation of Two Cases."—B. G. Copeland, Birmingham, Ala.

"Abortion"—Emmett K. Moon, Bridgeport, Ala.

"Abnormal Cardiac Phenomena: Their Differentiation and Significance."—R. M. Cunningham, Pratt City, Ala.

"Conservative Gynecology per Rational Medication."–R.H. Hayes, Union Springs, Ala.

There has been but two deaths out of 90 major operations at the new hospital for women in Euston Roads, London, England. All the surgeons are women.

Technical Details in Asepsis.

At a recent meeting of the Berlin Medical Society a discussion took place with regard to a paper read by Schaffer on asepsis. (British Medical Journal.) Duhrssen said that the principle of asepsis was so simple that it could be appreciated by every one. The practical realization of this principle, however, was by no means simple, and required the careful consideration of each individual surgeon. He employs an aseptic operating-coat, which he removes from the sterilizing chamber,having previously washed his hands with a nail brush. The lid of the chamber is raised by an assistant, who is not allowed to touch the coat. The process of buttoning is accomplished by a second assistant Lister's theory of the infection of wounds by the access of air was considered to have a wider significance than infection by contact. In this connection the author stated that it was most important to see that all bleeding had stopped before the wound was closed, as blood accumulations formed a most favorable medium for the growth of bacteria. In peritoneal operations this was most important. Cases which did badly usually showed post mortem signs of blood extravasation in those parts which had been subject to operative treatment. Asepsis (according to Schaffer and Duhrssen) at the time of operation would not insure a good result unless all bleeding points had been secured before the wound was closed.

Tetany and Autointoxication in Childhood

Kassowitz (International Medical Magazine) does not believe that autoinfection can be a cause of tetany. In the summer months, for instance, a time at which the digestive diseases are abundant, tetany rarely occurs, increasing, however, as the autumn and winter months advance, and being most frequent in the spring. He considers that the chronic intestinal affections bear no causative relation to the condition. The dyspeptic, the constipated, and the marasmatic children remain almost entirely free from tetany. He believes that the connection between rachitis and tetany is established; their yearly curves are almost the same. The children who sicken with tetany in the first year of life, and both diseases preponderate in the first two years, suffer almost always from rachitis, while cases of autointoxication are not decreased at this age. In addition to these facts, the phosphorous treatment will not check autointoxication, while it has a decidedly favorable influence upon tetany.

The explanation of the connection he

finds in the inflammatory condition of the growing bones, in the hyperemia of the bones of the skull, which further conducts itself to the cerebral cortex to seek an irritated condition of the cortical centers, and, for the development of typical tetany, to adopt an especial center.

The Sting of the Honey Bee.

There has been more or less discussion of late on the effects of bee stings. Some authorities claim that after a number of stings persons become immune; others declare that it is only in exceptional cases that this state of things occurs. There are many beekeepers who never becomes so accustomed to the stings that they feel willing to risk the pain at the moment and the extremely uncomfortable soreness that follows contact with these small but fierce antagonists. To be sure some persons are less affected than others, but this proves nothing from a scientific standpoint. An experience of years has led a number of agriculturists to the belief that there are seasons and conditions that govern the effects of bee stings. One of these does not suffers at all during some seasons, while at other times the poison is most virulent, permeating the whole system and producing a sense of general illness. Sometimes large blotches break out all over the body; at other times the suffering is confined to the injured locality. From the best authorities it appears that much depends upon the plants from which the bee has lately fed. Certain herbs are poisonous to certain persons, and if the bee has recently gathered honey from them their toxic properties seem to be conveyed from the bee to the individual. That one may become partially immune is not to be questioned, but that absolute immunity ever occurs may be subject to reasonable doubt.

Uric Acid and Mental Depression.

Haig, in a recent issue of the Practitioner, states that he has established that there is a relation between retention of uric acid in the blood and a state of mental despondency. When uric acid is present in excess depression of mind and irritability of temper are marked, but give place to a feeling of mental buoyancy when the excess is got rid of. Many suffer from mental lassitude and from depression in the morning between breakfast and lunch. It is at this time that the acidity of the urine is the least, and that the excretion of uric acid is normally at its greatest. Alkalies will produce artificially this condition of things by washing an excess of uric acid into the blood. By administering neutral acids in sufficient quantity to neutralize the excessive alkalinity of the blood the mind clears, and a feeling of well being replaces despondency and heaviness. A strongly alkaline state of blood permits solution of uric acid in excess, which, in its turn, brings about mental depression. Coincident with increased alkalinity of the blood, excretion of uric acid by the kidneys is proportionately in excess of the average. A dose of mineral acid will drive the uric acid out of the blood and diminish its excretion in the urine. Shooting pains in the joints very commonly accompany the disappearance of the uric acid from the blood. The occasional administration of mineral acids will not always cure headache produced by excess of uric acid. It is important that flesh food be eaten sparingly. Stimulants must be avoided. In severe cases the diet must be restricted for months to bread, butter, milk, potatoes, and fruits. At the beginning of treatment the washing out of excess of uric acid may be hastened to by gr. xv. of sodium salicylate three to four times daily. In some cases a single dose of gr. xx. at bedtime is sufficient.

Anti-Phymin.

Anti-Phymin combines the essential elements which seduce the blood cells, and produces disintegration or separation of micro-organic germ life, and as the bacilli feed upon their own products, thus separated, they soon die for want of proper nutrition, and are eliminated by natural channels. The blood then begins to build up from a healthy reaction produced by the effect of the nitrogenous elements and is sustained by the combined forces contained in the anti-phymin.

Theoretically the blood is composed of minute and sensitive cellular masses of life called micro-organic—meaning life within itself—and controlled by laws of effect, as for instance, blood life is said to be controlled by vascular motion, when in fact vascular motion is controlled by blood life, or blood cells in their entirety. The theory of death to germ life by the internal administration of germicides, is far beyond its field of proof. Germs can be destroyed by causing disintegration, separation and exfoliation of micro-organism, which pass out of the system by natural channels. It is thus that Anti-Phymin cures consumption and diseases of germ origin. The testimony being constantly received from the medical profession of America, verifying the curability of the "Great White Plague" by Anti-Phymin is sufficient to justify us in asserting the fact that at last the profession has at its command a rational and non-toxic remedy for the cure of this dread disease.

Malarial Affections of the Eye.

Dr. T. M. Yarr (British Medical Journal, Sept. 24, 1898).

Text-books on diseases of the eye as a rule dismiss the subject of malarial eye affections in a few words; in fact, I am only aware of one in which anything like an adequate summary of the state of present knowledge of this important class of diseases is given. When we consider the large amount of space often devoted in these works to diseases and congenital defects of excessive rarity—to the curiosities of ophthalmology, so to speak—the absence of detailed reference to malaria becomes astounding.

Most medical men in practice in the tropics are familiar with a distinctively malarial class of eye diseases, with characteristic symptoms, characteristic ophthalmoscopic signs, and, above all, characteristic pathology; and few writers on tropical diseases omit more or less detailed allusions to the subject.

Malarial eye lesions all originate in circulatory troubles, and may be conveniently classified under the following heads: 1. Neuritis; 2. Retinal hæmorrhages; 3. Retino-choroiditis; 4. Effusions into the vitreous.

From one of my Hong Kong casebooks I take the following brief notes of a typical case of malarial neuritis:

Private A. F., admitted to hospital complaining of supraorbital pains, dimness of vision, and photophobia. During preceding 12 months he had been in hospital seven times with malarial fever; no attack of exceptional severity; he is thin, anemic, spleen slightly enlarged; temperature normal, urine normal. Vision 6-60 each eye; fields normal; colour perception unimpaired; disc raised, reddish-grey, margins bluraed; rest of visible fundus normal save for a slight haze. He was placed on light, nutritious diet—chicken, fish, beef-tea—and given quinine. A week later the visual acuity had improved to 6-13, but reverted after three days to 6-36, and varied between that and 6-24 for some time. Five weeks after admission it suddenly became 6-12, at which it remained. The supraorbital pain and photophobia ceased a fortnight after admission. After seven weeks in hospital he was sent to the sanitarium on the "Peak," and from thence invalided to England a month later with "malarial cachexia." Examined again before leaving: V. A. 6-12, fields normal, with the exception of a very slight contraction on the nasal side, colour perception normal; fundus normal, with the exception of a slight greyness of the temporal half of optic disc. Signs and symptoms binocular throughout. No history of syphilis.

I have selected the above case as embodying most of the characteristics of the disease. (1) It will be seen that the patient had suffered from repeated attacks of malarial fever. (2) In the commencement supraorbital pain and photophobia are almost constantly present; night-blindness frequently. (3) Colour perception remains unimpaired, except in the rare case ending in complete atrophy. (4) The variations in the visual acuity in the course of the malady form the most characteristic symptom and distinguish malarlal neuritis from all other forms. A diminution of the V. A. to 1-10th can rise in two or three weeks to $\frac{1}{2}$ or $\frac{2}{3}$, falling again perhaps in two or three days. (5) Fields intact or only slightly contracted. (6) The fundus changes visibly with the ophthalmoscope include swelling of the papilla, which assumes a greyish-red colour, œdema of the circumpapillary retina, with effacement of the papillary margins, and enlarged and tortuous veins. The peculiar coloration of the papilla—*teinte rouge-grisatre*—due to parasites in its capillaries is pathognomonic. In about a third of the cases tiny peripheral retinal hæmorrhages are also found. (7) About 80 per cent. of cases terminate in a partial atrophy, indicated by varying diminution of visual acuity, irregular contraction of the ffeld, and slight greyness of the disc; many end in apparently complete recovery; some rare cases go on to complete atrophy.

Two varieties of retinal apoplexy are found in association with malaria:

1. *Minute Peripheral.*—Minute hæmorrhages in the ciliary zone of the retina are frequent in acute attacks of fever; they are often so very minute and so far forward as to be easily overlooked. Poncet found them in all cases of death from malaria. They may accompany or follow neuritis, but often form the only appartent lesion of the fundus. It seems probably that many of the transient disturbances of vision so commonly seen in malarial fevers are due to slight œdema of the retina, followed by these tiny hæmorrhages.

2. *Large Peri-papillary and Macular.*—The large peri-papillary and macular hæmorrhages are much less frequent, and, like the neuritis which they sometimes accompany, are usually seen only in malarial cachectics. These are of much graver import, always causing some impairment of vision, and occasionally even absolute loss. I believe many of the cases of "sudden and persistent amaurosis" described by writers on malaria to be due to macular hæmorrhages. In a

case of malarial cachexia invalided from the Indian Frontier, which I recently saw at Netley by the courtesy of the Director-General, Army Medical Staff, there were several hæmorrhages arranged in a curiously symmetrical manner along the inferior temporal vessels in both eyes: V. A. in right =6-12, in L.=6-24; urine normal. Microscopic examination shows these retinal apoplexies in malaria to be due to infarcts of parasites followed by extravasations.

In about 20 per cent. of acute intermittents, generally towards the end of the hot stage, patients complain of supraorbital pains, tenderness on pressing the eyeballs, photopsies, and photophobia. Examination then discloses a general hyperæmia of the fundus, mainly venous; red, slightly swollen papilla, surrounded by a grey veil; and generally haziness of the retina, which appears to have an undulating surface—"dunes" with intervening depressions.

This œdematous state of the occular membranes—the first stages of malarial retino-choroiditis—generally subsides without leaving any appreciable trace.

I have been able to watch the progress of such a case in a man—a discharged soldier who had suffered much from malaria in Burmah—who had been attending Moorfields for the last twelve months; the fundus is now of an almost uniformly grey colour, as though powdered over with pepper, the disc is pale, and the arteries reduced to fine threads; the distribution of the choroidal vessels is mapped out with extraordinary clearness, the vessels seem almost white, with a central red streak; pigment layer of retina and choriocapillaris atrophied; vision 4-60 in one eye, 6-60 in the other; some myopic astigmatism, but the correcting glasses only improve to 6-36 and 6-12; fields irregularly contracted. When first seen he had only general haziness, and loss of lustre of retina, with V—6-12 in each eye, with correction. The subsequent capillary atrophy of the choriod, and partial atrophy of the optic nerve is due to chronic inflammation of the choroidal and retinal vessels, set up by the irritation of the plasmodia, ending in atrophic changes.

White Infiltration of Vitreous.—This rare and curious affection was first described by Seely, and consists in an infiltration of the vitreous, forming in stages, causing almost complete loss of vision for a time, and giving a characteristic white reflex with reflected light. Seely attrlbutes it to a serous infiltration due to chronic paludism. In his two cases the progress of the disease was oscillating for several months; eventually the visual acuity become normal under prolonged quinine; in one case mobile opacities persisted.

It remains only to enumerate some of the rare or obscure affections mentioned by writers on malaria.

Sudden and Persistent Amaurosis without Visible Fundus Change.—Well-authenticated instances of this are on record. They can only be attributed to some obscured focal brain lesion.

Periodic Amaurosis.—See remarks on œdema of retina and retinal hæmorrhages. Possible also due to quinine.

Sudden Amaurosis ending in Atrophy.—Possibly due to hæmorrhage into the sheath of the optic nerve; occasionally cases of quinine amaurosis.

Persistent Central Scotoma.—I have never seen a case that was not due to macular hæmorrhages.

Periodical Blue Vision.—Baas describes a case of malarial fever in which this curious symptom was present. I am unable even to conjecture an explanation.

The treatment of malarial eye troubles is the treatment of malaria; most essential of all is the early removal of such cases to a non-malarious country. A prolonged course of iodide of potassium is generally of benefit in hastening the absorption of vitreous opacities.

Heurteloup's artificial leech to the temples, protection from light, blisters, are useful in relieving local symptoms.

Slight degrees of quinine amaurosis, are amongst the familiar experiences of all practitioners in malarious countries. A certain amount of amblyopia is almost invariably present in cases of cinchonism synchronous with the aural symptoms, and due to spasmodic contractions of the arteries. In very susceptible individuals this may amount to absolute blindness, persisting for hours and even days. In severe cases varying amounts of concentric contractions of the field remain, central vision, colour, and light senses being as a rule unaffected. In slight degree of quinine amaurosis the ophthamoscopic appearances are normal; in severe cases, with persistently, contracted fields, pallor of the disc and thready vessels are found.

The stoppage of quinine with tonics and nitro-glycerine generally leads to ultimate cure. I need hardly add that in treating ocular affections in malarials the possibility of the symptoms being produced by quinine should never be overlooked.

Sleep and Sleeplessness.

Remedies for sleeplessness are promulgated so freely that one would think it an easy matter to provide one, unless he has been a sufferer in this respect himself, in which

case the absurdity of the sweeping character of the remedies will be apparent. No one device for procuring sleep is suitable for all alike; what will do for one person will not do for another. It is a question of the cause of sleeplessness in each instance, and not the fact alone that one connot sleep.

As broad a definition of the requirement of the remedy is stated to be the art of forgetfulness. Some persons have trained their minds so they can forget things at will. If the judge undertook to remember all the details of testimony at a trial he would be overburdened with work that would be unnecessary. He merely remembers the facts that have a direct bearing on the issue. Just so with the editor who reads many exchanges; he remembers what he wants to, and no more.

But the art of forgetting required as a remedy for sleeplessness goes further than this; it is a forgetting of consciousness itself—a difficult matter with some but not with others, Some persons can go to sleep at will so disciplined are their minds; but prehaps they could not do this in case of long-continued overwork, resulting in irritation and fretfulness.

It will be interesting to collect the many remedies that have been suggested for sleeplessnes. A hot shower bath at bed-time cleanses the skin and predisposes to sleep, it is claimed. The "one sure and safe way" is to take a brisk walk of a mile or two before going to bed, and then, after the walk, holding the head under a stream of cold water. This, however, should be done when the habit of sleeplessness first begins.

A business man with a mechanical turn of mind should fit up his attic as a carpenter's shop, and spend an hour therein after supper. A walk of two or three miles a day is sufficient. Again, relief for sleeplessness can be found by wetting a linen kerchief, folding it, and placing it under the back of the neck, with a dry cloth under the kerchief to protect the pillow. Still again, warm the feet by friction, extra wrappers, &c., and cool the head, either in a draught of cold water or ice. One sufferer has palliated the distress of his vigils by leaving his bed, lighting a fire, sitting in the chimney corner, reading and eating by turns, untill the demon intimated a desire to depart.

A prominent physician once said that the evening should be a period of relaxation and recreation, relief from care and anxiety to be found in cheerful conversation, pleasant games, and light reading, while persons of sedentary occupation are to take plenty of open-air exercise. A feeble circulation is to be overcome, and cold feet are to be warmed. The stomach is to be attended to, if its digestion is not good. If it is overloaded, easy and refresing sleep is impossible. Weakly persons and invalids often find a cup of hot broth or gruel, or some other light and easy digestible food, taken on retiring, to be the best promotive of sleep. The bed should neither be too hard nor too soft, nor the clothing too abundant nor too scanty. All unpleasaut sights, sounds, and smells should be excluded. Regular and early hours of retiring are essential.

Mixed Infection in Tuberculosis of the Lungs.

The Boston Medical and Surgical Journal in its issue of October 6, 1898, publishes an abstract of a paper by Schabad, in which the following conclusions are presented after a study of a bacteriological examination of thirty-one cases of pulmonary tuberculosis;

1. Those cases only are to be considered instances of mixed infection in which the secondary organisms are found in the lung tissue or in the blood. 2. The presence of pathogenic organisms in the sputum, even in pure or almost pure culture after Kitasato's method, is not enough to prove a mixed infection, since experience has shown that all micro-organisms grown in that way do not come from the lungs, the only true exception being the true pus streptococcus. 3. It is very important not to confound the real pus streptococcus with the so-called streptococcus of mucous membranes which morphologically resembles it, but differs in its biological peculiarities and absence of pathogenic properties. While the latter play the role of harmless parasites, the former has a decided prognostic significance, since it enables one to diagnosticate a streptococcus mixed infecction, altogether the commonest form in tuberculosis of the lungs. 4. Less often a secondary infection occurs with the micrococcus tetragenus and pneumococcus, or a double infection with the streptococcus and staphylococcus or the streptococcus and pneumococcus. 5. Secondary infections complicate chiefly the last stages of pulmonary tuberculosis and soon lead to death. It is so common that almost every case of the disease which comes to autopsy shows evidence of it. 6. The significance of the secondary infection lies in the fact that it co-operates with the tubercle bacillus in the pneumonic process, or at least exerts a harmful influence through the toxins of its bacteria on the general condition of the patient, on the fever, and in the destruction of the lung. It can also occasion a septicemia, which then appears as the last act of a mixed infection. 7. Un-

doubted cases of pulmonary tuberculosis occur which run their course with all the manifestations of the hectic process and end fatally without the participation of any other organism than the tubercle bacillus. 8. Hectic fever of the severest type is characteristic of uncomplicated cases of tuberculosis of the lungs. In cases of mixed infection, with streptococci, the typical streptococcic curve is seldom observed; in most cases the temperature is remittent, or approaches the constant type. 9. A normal temperature characterizes stationary uncomplicated pulmonary tuberculosis. A mixed infection with a normal temperature (a passive mixed infection in Spengler's sense) is hardly probable.

Quinine Hemoglobinuria.†

Murri reports a case of this affection. A girl, aged 17 years, contracted tertian ague in July, 1897. In spite of treatment she was not cured in January, 1898, and was still taking quinine. At that time she had an attack of ictero-hæmoglobinuric fever directly after taking quinine, and subsequently whenever quinine was taken such an attack was observed, consisting in rigors, vomiting, followed by smoky urine, and, lastly, jaundice. The spleen became larger and firmer, and sometimes the liver enlarged also, with hypochondriac pain. At the beginning of attack there was simple polyuria, then from being acid the reaction became alkaline, and, lastly, peptone, serum, albumin, globulin, and hæmoglobulin, and urobilin, hyaline casts, epithelial renal cells, and leucocytes appeared, but no red corpuscles or bile pigments. After an attack all the above disappeared, the serum, albumin and peptone last. An examination of the blood showed there was a diminution of the number of red corpuscles, but the malarial parasite could never be found. In spite of this effect of quinine it had its usual influence in prolonging the interval between the attacks of true malaria. The author gives reasons for believing that quinine hæmoglobinuria occurs only in those whose organs have been altered by malaria, quinine alone being insufficient to produce it. (1) For twenty years he has been trying to produce quinine hæmoglinuria in animals without succese. (2) In a healthy man seventy-five or even 300 grains of quinine produce no hæmoglobinuria, while in this girl, after malaria, 1.54 grains did with absolute certainty. (3) No case of quinine hæmoglobinuria has been reported which was not complicated by malaria. (4) The proof that one has not to do with an idiosyncrasy in a person with whom malaria is a coincidence is furnished by the fact that quinine intoxication appears in most cases, — sometimes after a good many doses have had to be taken—that is, after the malarial poison has had time to act on the organism, but not before. (5) It is not produced by an intolerance gradually set up by repeated doses of quinine, for large and repeated doses are often given in non-malarial diseases, and yet not a single case of quinine hæmoglobinuria has been reported in these. (6) This hæmoglobinuria is almost unknown in Europe, except in Sicily and Greece, and becomes relatively frequently in extra-European countries, where malaria is more virulent. (7) The author's patient had three ictero-hemoglobinuric attacks after the malaria was cured, and without any quinine having been given. This shows that the hæmoglobinuric mechanism had become so easily set in motion that its usually specific stimulus (quinine) could be replaced by others, though exactly what these were could not be discovered. It seemed as though the biological change left in the patient by malaria would not be permanent, for some months after the patient had been cured of her malaria and had had no quinine attacks, a little over one and a half grains of quinine, given experimentally, had very little effect, and even seven and three-quarters grains of quinine given experimentally, had very little effect, and even seven and three-quarters grains, though causing intoxication (fever, albuminuria, peptonuria, and urobilinuria) produced no hæmoglobinuria.

†Abstract in British Medical Journal.

The Diagnosis of Cancer of the Breast.

The differential diagnosis of tumors of the breast presents difficulties which are more serious than is commonly thought to be the case by those who have not had a large experience in the matter. The International Journal of Surgery in one of its recent editorials says:

Certain cases, of course, present classical symptoms that cannot be mistaken, and in others, while we may be certain that a tumor is malignant, we have some trouble in recognizing the degree of malignancy. The latter is a factor of the utmost importance in tumors that have reached any size since, perfect though our modern methods of operating may be, there are some forms of cancer in which rapid recurrence is bound to take place, and in which operation is often inadvisable for this very reason. It has at times been our mischance to effect the very thorough removal of a cancer of

the breast which, as shown by subsequent microscopical examination, might better have been left alone.

There are certain cancers of the breast that present but a few of the classical signs. The latter are adherence of the tumor to the deep parts and to the skin, retraction of the nipple, hardness of the tumor, sometimes with fluctuating portions, if any cystic element should be present, and the early involvement of the axillary glands. The latter, however, should never be considered as an indispensable sign, since, especially in fat women, it is often difficult to feel the glands even when considerably enlarged.

Chronic mastitis often enough is somewhat difficult to distinguish from beginning epithelioma or carcinoma. Chronic mastitis may be generalized over the whole gland, and in some cases the diagnosis, by any but microscopical examination, may be practically impossible. Mastitis usually occurs during pregnancy, or after parturition, which is not commonly the case with cancer. In chronic mastitis there is usually an œdematous condition not seen in cancer, in which the tumor does not keep the imprint of the finger, or does so only to a very small extent. Mammitis is often attended by retraction of the nipple, but this occurs in a regular manner, the nipple being surrounded by a circular ridge of skin. If the latter is pulled back with the fingers, the nipple will stand out. In cancer this can not be done. In mammitis the pain is more severe, and the attacks are more frequent, than in cancer, where pain may sometimes even be absent, as long as there is no ulceration. Glandular enlargenent is also seen in mammitis, but the character resembles more that which we are accustomed to observe in those forms of adenitis due to some peripheral irritation. The most important diagnostic sign lies, however, in the improvement noted in mammitis under the influence of rest and pressure. If a tumor is not yet far advanced, and there is any diagnostic doubt, this should be tried. A fortnight however, is amply sufficient to give the needed information in regard to this point.

Tuberculous lesions of the breast are often mistaken for cancer. The clinical diagnosis is often very difficult, and sometimes well nigh impossible. In tuberculous mammitis there generally co-exists, however, a recognized pulmonary tuberculosis. Temperature changes suggesting tuberculous troubles are also observed. In tuberculosis the tumor is sometimes single, resembling an encephaloid cancer, and sometimes multiple, a condition never existing in cancer. As in all tuberculous lesions, we see after a while symptoms of local inflammation, often ending in fluctuation through the formation of more or less cheesy pus.

The degree of malignity of cancers of the breast may often be gauged by the amount of lymphatic generalization of the disease. If at a comparatively early date the so-called hard œdema of cancer is rapidly followed by an invasion of all the surrounding lymphatic tissues, producing ordinary œdema, we may be certain that the cancer is of a very malignant kind.

With all thes rules for diagnosis, we still are sometimes rather in the dark. In such cases our duty is very clear: operate at once. We must always recollect the fact that, however much a patient may be averse to submitting to an operation, her life is a very unhappy one as long as she is carrying about a suspicious tumor, and worrying night and day about it.

Fevers of Compound Origin.

Dr. J. A. Crombie (British Medical Journal, September, 1898,) says:

In India the combination of malarial infection with that of typhoid fever serves to obscure the early symptoms of typhoid, giving us, I think in the majority of cases, a violent and sudden access, instead of the usual gardual and step-like rise of the first three or four days. In such cases the *plasmodium malariæ* may be detected in the blood during the first week, and again during the first week of convalescence (Laveran) introducing the intermittent character so often seen at those stages of typhoid fever in India. Beyond giving rise to this increased difficulty in diagnosis, and delaying convalescence, I do not think that the moderate presence of the malarial habit has any appreciable effect on the progress of an ordinary case of typical typhoid in India. The older authorities on Indian fevers frequently mention a type of fever in which, together with an enlarged spleen, there were congestion and swelling of Peyer's patches. Dreschfeld, in Allbutt's System of Medicine, also alludes to it under the title of spleno-typhoid; but I doubt whether this combination of typhoid and malaria is entitled to a separate place in the *Nomenclature of Diseases.*

"Kala-azar," which is at present devastating large tracts of country in Assam, would appear to be a combination of the effects of a malignant form of malarial poisoning, together with the debilitating effects of large numbers of the *ankylostomum duodenale* in the bowel. But the whole relationship of the disease has not yet been quite satisfactorily cleared up.

"Hæmoglobinuric fever," the "black-water fever" of Africa and the West Indies, is practically unknown in India. Koch appears to favor the opinion that it is somehow due to the effect of large doses of quinine in persons affected by malarial poisoning. The fact of its absence in India, where malaria in all its forms is habitually treated by very free dosage with quinine, is alone, I submit, sufficient to controvert this hypothesis. Quinine, in quantities ranging from sixty to ninety grains a day, is constantly given in India in malarial fever and yet I have only seen hæmoglobinuria in two cases. If hæmoglobinuric fever is due to the malarial parasite, its limited geographical distribution excludes quinine, as the secondary cause of the peculiar symptom which characterizes the disease, which must be due to a cause more locally distributed.

Eczema in Infants.

At the meeting of the British Medical Association recently held in Edinburgh the discussion as to the origin of eczema was deeply interesting. (Pediatrics, Oct. 1, 1898.)

Mr. Malcolm Morris upheld to a great extent Unna's view that the disease is of parasitic origin, going so far as to declare that he was of the opinion that parasites were capable of producing eczema even if it were not actually a parasitic disease. Dr. Talcott Fox said "that since the promulgation of Unna's ideas on eczema he had determined to study again the condition known as eczema, nnbiased, as far as possible, by the learnings of his early training.

In offering a few observations on the disease in children, he said he did so because in them the problem was, in a measure, free from some of the complications met with in later life. In infants and children he saw two phases of eczema. The first was the state commonly known as eczema, which began most frequently in infancy on the scalp and descended thence over the face to cover, in some instances, the greater part of the surface. The second phase consisted of dry, reddish areas, with scanty, adherent scales, separating along the lines of flexion, but these patches might also, when irritated, take on a vesicular form, indistinguishable from the first phase. This was also a descending inflammation, beginning on the face or scalp, as a rule, which he used to call seborrhœa, but that was no doubt a bad term. This was the common affection described by Savell as epidemic among children. These phases ran into one another so much that he had constantly the greatest difficulty in separating them, In the next place he could find no cause whatever in the majority of children, for the patients were apparently in excellent health. He did not deny the influence of constitutional disturbance such as rickets or gastro-intestinal trouble in increasing the irritation and intensifying the inflammation, but the phases of eczema seemed to be essentially of local origin. It was possible that the future might disclose varieties caused by various parasites." The theory of parasites as a cause of eczema is rapidly gaining ground. Prof. Lassar, of Berlin, scouts the idea of irritation from internal sources being a cause of eczema and points out how favorable are the skin changes in eczema to the growth of saprophytic and pathogenic micro-organisms.

A Hæmatozoon in Goitre.

At a recent meeting of the French Academie des Sciences Prof. Grasset, of Montpellier, communicated the results of a study, extending over ten years, of persons suffering from goitre in the Pup de Dome department. British Medical Journal, Sept. 24, 1898.)

In that region there are places where the disease is endemic, and others where it is entirely unknown. The affection is observed to develop after menstruation, childbirth, emotional disturbance, or a chill; often it appears consecutively to a slight fever or an attack of gastritis. From these facts Grasset concludes that goitre is a general disease with a dominant local symptom, to-wit, the enlargement of the thyroid gland. This feature of the affection he regards as analogous to the enlargement of the spleen characteristic of malaria. He points out that both diseases have a special geographical distribution, both affect a gland with internal secretion, and both end in cachexia. In the blood of eight patients suffering from recent goitre (ten to fifteen days) Grasset found special parasitic elements. He describes these as spherical bodies larger than blood corpuscles, having no nucleus and containing red pigment. Each has a free flagellum, four times as long as the diameter of a red blood corpuscle. There are also segmented bodies, agglomerated or separate, and, lastly, there is a body of irregular contour containing red pigment but no nucleus, These elements recall the hæmatozoa of Laveran, from which, however, they differ by the presence of the pigment, and by the absence of the crescentic bodies. They resemble the parasitic elements found by Danilewski in the blood of healthy birds. None of the goitrous patients whose blood

was examined was the subject of malaria, or has since become affected with that disease. Grasset thinks that the existence of a specific hæmatozoon of goitre makes it probable that the disease is infectious.

Pregnancy and Goitre.

Bonnaire reports a case of pregnancy in a German woman from the country near Stuttgart. (British Medical Journal.) A large goitre, chiefly involving the middle lobe, extended to behind the sternum. After the end of the third month violent attacks of dyspnœa set in, mostly at night, and the goitre became engorged, tender, and painful during speech and deglutition. As in the seventh month the dyspnœa grew very threatening and was not controlled by doses of tincture of iodine; abortion was introduced. During the expulsive pains a remarkable change of symptoms set in quite suddenly. Instead of fits of dyspnœa, there were marked hysterical manifestations, globus, hyderæsthesia of a tract of skin under the breasts and in the region of the ovaries, and partial hemianæsthesia. The temperature kept at 103 deg. for several days for no reason connected with the genital tract. Bonnaire thinks that the swelling of the goitre during pregnancy was more than a coincidence, and that the prompt disappearance of the dyspnœa after abortion might partly be credited to the previous dosing with iodine which seems to have caused the goitre to diminish a little in size. The later attacks could not, he thinks, be purely hysterical, as there was not only rise of temperature but also recurrence of albuminuria, which had occurred a little before the induction of abortion and had promptly been stopped by appropriate treatment. After recurrence the strictest milk-diet system had proved vain, and the patient still suffered from albuminuria. The cardinal symptoms of exophalmic goitre were absent. Bonnaire attributes the attacks to auto-intoxication from the thyroid tumour.

Locomotor Ataxia in its Modern Aspect.

There being no syphilitic exudation in true tabes, anti-syphilitic treatment is uncalled for. Diet, hygiene, rest, are the main factors in the successful management of the disease. Digestion, assimilation, elimination, must be promoted. Climate, medicines, and electrotherapy are of distinct value.

Distressing symptoms, the "lightning pains," "ataxia," &c., are to be alleviated without impairing the general nutrition. Opiates had better be avoided.

Rest in bed is a valuable measure when obtainable. The patient should sleep much and work little. When complete rest is not practicable, a few extra hours daily in the horizontal position is advisable.

The diet should be liberal—meats, fats, milk, water in abundance, and fruits, with a minimum allowance of starchy and saccharine foods. Alcohol is to be prohibited.

The patient should wear warm clothing, and, if possible, spend his winters in a warm climate. Measures addressed to the elimination of auto-toxines generally by the skin, kidneys, and bowels should be instituted.

Drugs of more or less use in the treatment are those of nutritional value, mainly phosporus, iron, cod-liver oil, with tonics such as strychnine.

For the lightning pains aluminum chloride (dose, two to four grains in water) is a drug of considerable value. Dr. Gowers originated its use for this purpose.

Electricity is of a distinct value in a large proportion of cases. Ordinary faradism is useless, galvanism better. The writer's experience has led him to value highly the sinusoidal current. It is a current of "high potential" (voltage) rapid alteration (480 to 1920 per second,) and comparatively small "quantity" (amperage). Its application is simple and controllable, as well as pleasant to the patient. It is administered by means of a "foot-plate" and a neck electrode for from five to fifteen minutes every alternate day for six weeks. Under its use, with simple hygiene and often without drugs, the lightning pains cease, the ataxia of gait and station disappears, and the well-being of the patient is promoted. These effects would seem to indicate an actual improvement in the nutrition of the peripheral sensory neuron, with capacity for better function in some, possible restoration of damaged nerve endings in others.

Acute Nephritis in Children.

Dupeu (British Medical Journal) finds that the affection is in reality more common than is supposed, but fortunately the disease is much more hopeful in its prognosis than in adults. The author looks upon measles as a more frequent cause than is supposed by some authors, for it is definitely stated by some that it is extremely rare in this condition. Irritation and absorption from the skin would seem to be a cause of acute nephritis; thus blistering, the application of turpentine, carbolic acid, etc., may produce nephritis, and it has been known to follow burns, severe electrisation, too hot baths, and inflammatory conditions as eczema, erysipelas, impetigo. Chicken-

pox has also been observed to cause nephritis, as first pointed out by Henoch. Others consider it exceptional, but the author quotes Descroizille as stating that the most frequent complication of varicella is nephritis. These cases all seem to terminate favorably. Post-vaccinial nephritis is also described, acute inflammation of the kidney may even follow tonsillitis, and a case is quoted in which a recurrent tonsillitis was always accompanied by acute nephritis. Lastly, the author states that nephritis may be the result of ordinary gastro-intestinal intoxication, more particularly when there is dilatation of the stomach. This has been observed in children as young as eleven to sixteen months fed by the bottle, and in whom vomiting and diarrhœa were prominent symptoms. In these cases there is very marked abnormal fermentation taking place with the production of more or less toxic products which when absorbed are competent to produce nephritis. The duration of these cases varies from two to four weeks, and may be accompanied by all the usual signs of Bright's disease.

The Management of Patients Before and After Laparotomy.

Wiggin (The Lancet of April 30, 1898,) call attention to the following practical points:

1. The importance, whenever practicable, of prolonged preparatory treatment of patients about to undergo an abdominal operation. 2. The importance of the administration of cathartics in the early part of this period, followed by large enemas for the purpose of cleansing the intestinal tract. 3. The importance of keeping a record of the body temperature, respirations, and pulse-rate for several days in advance of the operation, and of making a final examination of the urine. 4. The necessity, in the female, of arranging to have the operation performed a few days after the menstrual period, and the cleansing of the vagina even when it is intended that the operation shall be by the abdominal route only. 5. The administration of a small quantity of peptonized food (one ounce) containing stimulants two hours before giving the anesthetic, for the purpose of lessening the tendency to nausea and vomiting after the recovery of consciousness. 6. The necessity of the anesthetic being given by an experienced physician and in the smallest possible quantity. 7. The necessity of protecting the patient's body properly with clothing and blankets during the operation. 8. The advantage of stimulating the patient before the heart has become much exhausted and of using intravenous saline injections before the radial pulse has become extinct. 9. The leaving in the abdominal cavity after free irrigation of a quantity of hot saline solution for the purpose of stimulating the patient, preventing (?) the formation of intestinal adhesions, and lessening the danger of septic infection of the peritoneum. 10. The necessity of making the patient comfortable by change of position during the first two days of convalescence and by the use of the rectal tube. 11. The necessity for the early administration of food in reasonable quantities and at proper intervals. 12. The necessity of withholding stimulating enemata after operations in which extensive and firm pelvic adhesions have been broken up. 13. The necessity for deliberation as to the wisdom of reopening the peritoneal cavity in a given case of supposed concealed hemorrhage. 14. The importance of washing out the stomach as soon as the diagnosis of intestinal paresis is made and of the persistent use of saline cathartics till the bowels move. 15. The importance of not administering cathartics too early or in too large doses to those convalescing from abdominal operations and who are pursuing a normal course.

Perforative Peritonitis.

At the Denver meeting of the American Medical Association, Dr. J. C. Wilson commented on the diseases in which acute general peritonitis may arise. They do not, of course, include the traumatic and gynecologic cases.

1. In the alimentary canal: (*a*) peptic ulcer, gastric and duodenal; (*b*) enteric fever; (*c*) appendicitis. 2. Other hollow viscera, the contents of which may be infected: (*a*) the gall-bladder; (*b*) the pelvis of the kidney; (*c*) the urinary bladder, 3. Rupture of abscess: (*a*) purulent pleurisy; (*b*) subphrenic abscess; (*c*) hepatic abscess; (*d*) abscess of the pancreas; (*e*) appendicular abscess, and (*f*) other pus collections in regions in relation with the peritoneum. 4. Necrotic processes involving abdominal viscera: (*a*) internal strangulation; (*b*) intussusception; (*c*) volvulus; (*d*) embolism and thrombosis of the messenteric vessels; (*e*) gangrene of the pancreas or of the spleen; (*f*) displaced kidney or spleen with twisted pedicle; (*g*) acute hemorrhagic pancreatitis; (*h*) fat necrosis.

The symptoms in the early stages, when operative interference is advisable and with fair prospect of success, are:

1. Pain, general, becoming local; or local, becoming general, according to cause. 2.

Tenderness, general, becoming local; or local, becoming general. 3. Rigidity of the abdominal muscles. 4. Vomiting, green. Exceptionally absent. 5. Rise of pulse and temperature. Also exceptionally absent. 6. Shock, varying in depth. 7. Diminished peristalsis.

On the other hand, in the presence of the following symptoms, the author believes surgical interference is of questionable propriety. They indicate a fully developed peritonitis:

1. Pain lessened or absent. 2. General tenderness. 3. Excessive distention, replacing rigidity. 4. Excessive vomiting, green or fecal. 5. Obstipation; peristaltic movements not heard. 6. Rapid and feeble pulse. 7. High or low temperature. 8. Lividity of abdominal skin; cold extremities. 9. Peritoneal facies. 10. Mind clear.

The hopeless cases present the above symptoms to a more marked degree, to which is added collapse, and the patient is moribund.

In closing the paper, the author formulated the following propositions:

1. A definite causal or local diagnosis of the lesions can be made in comparatively few instances. 2. The diagnosis of acute general fulminant peritonitis is of itself sufficient to justify operative interference in proper cases. 3. The earlier the operation the greater the prospect of success. After twenty-four hours, especially if great distention of the abdomen has shown itself, operation is not likely to be followed by recovery. 4. A small proportion of the cases are manifestly hopeless from the onset. 5. Where the patient is not obviously past hope, the fear of death upon the table should not deter the surgeon from operating.

Normal and Antidiphtheria Horse Serum.

Szontagh and Wellman have not been able to prove the presence of nucleo-albumen either in normal or in the curative serum, and they maintain that the curative action cannot therefore be due to nucleo-albumen. (British Medical Journal.) The authors next examine the relation of albumen and globulin in these serums. The amount of globulin obtained by saturating serum with magnesic sulphate depends on the temperature. The authors do not look upon it as excluded that there should be a difference in the amount of globulin present in the various serums. The percentage of albumen present is rather less in normal serum than it is in antidiphtheritic serum, but no general conclusions can be drawn from it. The specific gravity of the two serums showed no difference. The lowering of the freezing point is less in antidiphtheritic serum. The electric conductivity is also less in antidiphtheritic serum than in normal serum. This may be due to the increased amount of albumen and the diminished amount of chlorides may not be without influence. The authors then give tables setting out these facts. One table shows the results of the examination of the serum from two horses before and after immunization, and they decidedly confirm the views expressed above. In the serum which the authors obtained from Preisz and Paltauf respectively the lowering of the freezing point and the conductivity diminished with the increasing amount of antitoxin present. The question of conductivity is not without its practical aspect, as the strength of the curative serum can at least be approximately calculated in this way.

Properties of Salt Water.

The attraction between water and salt produces some results which are sufficiently remarkable. The following simple experiment will illustrate this:—Take two glass jars, or two plain glass tumblers will do, and fill them with water; dissolve in one of them a few grains of common salt, and add to both some common white china clay stirring them well up, so that the clay is well diffused through the water, rendering it opaque. Care must be taken not to stir the one without the salt with the rod used to stir the one with salt. After stirring put both aside, and note how long the clay takes to settle in each jar, and the water becomes clear and transparent. A most remarkable difference will be noticed between the two. The water containing the salt in solution will be clear in about one or two hours, according to the quantity of salt dissolved; while the pure water will not be clear for twenty-four hours, or even thirty-six hours, if the water we use is very pure and soft. We see from this that the attraction of the salt for the water prevents the latter holding the particles of clay in suspension. The results flowing from this action of salt on water are very striking and important. The waters of the ocean, as we all know, hold in solution a considerable quantity of salt; about three parts in a hundred is the average; in fact, it is like our tumbler or jar of water, to which we have added a few grains of salt, and consequently cannot retain in suspension for any length of time finely divided matter—such as clay or sand. The obvious action of the salt, therefore, is to keep the ocean clear, all mud or silt is rapidly precipitated to the bottom, and forms those vast deposits found all over the bottom of the ocean in the dredging opera-

tions of the Challenger and other vessels. Further, we know that the rivers of the world carry down to the sea immense quantities of worn-down rocks and soil. During flood we see our own comparatively puny rivers rendered quite brown and muddy from the amount of suspended matter which they carry along with them on their courses. Some of the more gigantic rivers of other countries are never clear, but are laden during the whole year with large quantities of rock and soil waste, grinding down in the course of time the mountains and hills of the dry land, and carrying them into the midst of the sea. The waters of the Mississippi, for instance, are always muddy, and if we fill a jar from this river, it will remain muddy and opaque for days. Now let us consider what happens when the mud laden water reaches the sea. If we happen to live near the coast let us get a little sea water and mix it with fresh water in which we have stirred up a little clay, and note the result. The clay will be rapidly precipitated, and the water rendered clear. Now this is exactly what happens at the mouths of rivers—the mud and silt are at once precipitated where the river and sea waters meet. This is the reason why it is so difficult to keep the mouths of rivers and harbours clear of silt. We are compelled to use our dredging machines continually, or they would rapidly be rendered dangerous to navigation.

Rational Etherization---A Statistical Study.

Dr. M. B. Bronner, in the Medical Record summarizes a good article as follows:

1. That etherization should be entrusted only to experienced hands. 2. That a special cone is not necessary for successful etherization. The simpler and less complicated the apparatus the better. 3. That the so-called "force method" of etherization is unnecessary, cruel, and ofttimes injurious. 4. That vastly better results are obtained by a gradual, quiet administration. 5. That the amount of ether employed should be minimized, preferably given drop by drop after anæsthesia has been fully established. 6. That the evil sequelæ are directly proportionate to the amount of ether employed, and indirectly proportionate to the duration of the anæsthesia. 7. That the so-called baneful after-effects on bronchi, stomach and kidney are largely overestimated, and in a large degree controllable. 8. That women require a smaller amount of ether, though a longer time to produce anæsthesia, than men. 9. That alcoholic subjects require a longer time and a greater amount of ether to produce anæsthesia and to maintain it.

American Electro-Therapeutic Association.

Annual Meeting in Buffalo, N. Y., September 13th, 14th and 15th, 1898.

The eighth annual meeting of the Association was so well prepared for by the general profession of Buffalo under the able leadership of Health Commissioner, Dr. E. Wende, a member of the Association, and the arrangements were so perfect that it resulted in a grand success. The social and scientific programme was so blended that they did not interfere with one another. The papers read were of a high order, the session was well attended and harmonious, so that this meeting may be called a culmination in history, of the society, an advancement in an important specialty, which has achieved a grand success. Every one in attendance was pleased and never will forget the social and scientific treat, and the kind attention received in the beautiful city of Buffalo. If the absentees only knew what pleasures and opportunities for improvement they have missed, they would never forgive themselves for staying at home.

Tuesday September 13th—Morning Session

Shortly after 10 o'clock, Dr. Charles Rea Dicksou, of Toronto, Canada, President, called together the eighth annual meeting of the Association, which opened in the rooms of the Buffalo Society of Natural Sciences, Buffalo public library building.

Rev. O. P. Gifford, D. D., pastor of Delaware Avenue Baptist Church, offered prayer, after which President Dickson declared the convention open for business.

Dr. William T. Bishop moved that the privileges of the floor be extended to all members of the medical profession in Buffalo, whether residents or visitors. The motion was unanimously adopted.

President Dickson introduced Dr. Conrad Diehl, Mayor of Buffalo, who extended to the members of the association the freedom of the city. He spoke of the growth and development of electrical treatment since the time it was first adopted by the medical profession, as an important part of the professional apparatus. Dr. Diehl said that the street cars of Buffalo were now run by electric power from Niagara Falls and urged the members of the association to inspect the electrical plant of the Buffalo Railway Company.

Dr. Francis B. Bishop, of Washington, responded to the Mayor's welcome in behalf of the American Electro-Therapeutic Association.

Dr. Henry McClure, of Cromer, England, honorary fellow of the American Electro-

Therapeutic Association, was introduced and spoke briefly of his pleasure in being in attendance at the convention.

Dr. Thomas E. Holland, of Hot Springs, Ark., was introduced.

Reports of standing committees on scientific questions were next in order on the program. The President called upon Dr. Margaret A. Cleaves, of New York, who presented her report on meters. The report was accepted and the committee requested to continue its labors. A report on static machines and condensers by Dr. William J. Morton, of New York, was called for.

On constant current generators and controllers the report was asked for from the chairman of the committee, Dr. William J. Herdman of Ann Arbor, Michigan, but in his absence an auxiliary report was presented by another member of the committee, Dr. Robert Newman, of New York, who in 1896 was president of the American Electro-Therapeutic Association.

John J. Carty, electrical engineer, New York, made a brief verbal report of progress. He is chairman of the committee on the electric light apparatus for diagnosis and therapy and the Roentgen X ray.

The following papers were then read:

The Treatment of Certain Muscular Affections by Means of Electricity; by Dr. William F. Robinson, Albany, N. Y.

Electricity and Medical Institutions; by Dr. William S. Watson, Fishkill-on-Hudson, N. Y.

A Few Thoughts on the Misuse and Abuse of Electricity as a Therapeutic Agent; by Dr. Henry S. Jewett, Dayton, Ohio.

Phlebitis: A Clinical Study; by Dr. Margaret A. Cleaves, New York, N. Y.

Electricity as a Therapeutic Dernier Resort; by Dr. Henry Waldo Coe, Portland, Oregon.

The Diagnostic and Therapeutic Relations of Electricity to Diseases of the Central Nervous System; by Dr. A. D. Rockwell, New York.

The Afternoon Session.

The first paper on the program was by an honorary fellow of the society, Dr. Georges Apostoli, of Paris. The subject was "New Uses of the Undulatory Current in Gynæcology." The paper was translated from French into English, and was read by Dr. G. Betton Massey, of Philadelphia.

"Electricity in the Treatment of Uterine Fibromata," was the subject of a paper by Dr. Felice La Torre, of Rome, Italy, read by Dr. John Gerin, of Auburn, secretary of the Association. Then came a paper on "Electro-Therapeutics in Gynæcology," by Dr. Georges Gautier, of Paris, France, read in English by Dr. Dickson, President of the Association.

A paper by Dr. William J. Herdman, of Ann Arbor, Mich., on "The Use of Electricity in Gynæcology," was followed by a paper on "The Treatment of Uterine Fibroids by Small Currents, Administered Percutaneously," by Dr. Richard J. Nunn, of Savannah, Ga.

Dr. W. H. White, of Boston, read a paper by Dr. Adelstan de Martigny, of Montreal, on "Treatment of Menorrhagia by Weak Current and Silver Internal Electrode."

This was the concluding paper on the afternoon program. An early adjournment was taken in order that members of the association might avail themselves of the tally-ho ride about the city, planned by the committee on arrangements.

Evening.

A public reception at the University of Buffalo, corner of Main and High Streets, was held at 8.30, which was largely attended, many medical men of Buffalo, with ladies, being present.

Dr. Henry R. Hopkins, of Buffalo, a member of the local committee of arrangements, spoke of the earnest work of the medical men in this country. Dr. Charles Rea Dickson, of Toronto, President of the American Electro-Therapeutic Association, made a few remarks in which he spoke of the fraternal feeling existing between the two great English-speaking nations at the present time.

Dr. Robert Newman, of New York, made a brief address, as did Dr. G. Sterling Ryerson, of Toronto, deputy surgeon general of the Canadian militia.

Rev. O. P. Gifford, D. D., pastor of the Delaware avenue Baptist church, said that he knew of no other two professions so closely allied as the ministry and medicine. "When you succeed," said he, "we profit by your success. When you fail, we bury your errors."

Second Days' Session, September 14th.

After an executive session, at 9 o'clock A. M., the reading of papers was continued. The first paper was presented by Dr. Lucien Howe, who represents the Erie County Medical Society at the convention. Dr. Howe's subject was "The Method for Using Cataphoresis in Certain Forms of Conjunctival Inflammation."

Dr. Howe illustrated his address by means of a number of his patients. His lecture was received with great interest, and con-

siderable discussion followed. Many questions were asked Dr. Howe concerning his methods of treatment, the discussion occupying a large amount of time.

Dr. Robert Newman, of New York, presented an able paper on "Electricity in Deafness and Stricture of the Eustachian Tube." In his address, Dr. Newman rehearsed the history of a peculiar case which came under his professional care. He also cited a number of other cases which had been reported by other physicians. The discussion which followed Dr. Newman's paper was led by Dr. Howe, followed by Dr. A. D. Rockwell, of New York.

The use of Electricity in Diseases of the Nose and Throat; by Dr. John O. Roe, Rochester, N. Y.

A case of Pharyngomycosis with Treatment; by Dr. Caleb Brown, Sac City, Ia.

Elictricity in Acne Vulgaris and Acne Rosaceæ; by Dr. Grover W. Wende, Buffalo, N. Y.

The True Status of Electricity and Allied Remedies in the Treatment of Strictures and Prostatitis; by Dr. George W. Overall, Memphis, Tenn.

A Case Lightning Stroke without Serious Consequences; by Dr. William C. Krauss, Buffalo, N. Y.

The Use of Static Electricity in the Treatment of Diseases of the Nervous System; by Dr. W. H. White, Boston, Mass.

High Tension Current in Neuritis; by Dr. Francis B. Bishop, Washington, D. C.

Electro-Therapy of the Brain in Cerebral Hyperæmia and Hyperæmic Insomnia; by Dr. C. H. Hughes, St. Louis, Mo.

Electricity in the Treatment of Goitre; by Dr. Chas. R. Dickson, Toronto, Canada.

Dr. G. Sterling Ryerson of Toronto, deputy surgeon-general of the Canadian militia and the accredited delegate of the Ontario Medical Association, was introduced by President Dickson and spoke briefly, giving a number of instances of the effect of lightning, in which the results were not permanently serious. Dr. Ryerson is medical director and general secretary for Canada of St. John's Ambulance Association, of which His Royal Highness, the Prince of Wales, is the grand prior.

The Afternoon Session.

Many well-known Buffalo physicians attended this afternoon meeting of the American Electro-Therapeutic Association. The program was made up of a series of ten-minute talks on "Electro-Therapy" and the subject was one to attract widespread interest among members of the medical fraternity.

Dr. William J. Herdman of Ann Arbor, Mich., was down on the program for the opening talk. His subject was "The Effect of Electricity Upon Tissue Metabolism." The next paper on the program was by Dr. J. H. Kellogg of Battle Creek, on the same subject. The third paper was by Dr. John Gerin, secretary of the association, on Electric-Diagnosis.

Dr. G. Betton Massey of Philadelphia, presented a paper on "The Galvanic Current in Gynaecology." The next paper was by Dr. Frederick Schavoir of Stamford, Conn., on "The Faradic Current in Gynæcology." "Surgical Uses of Electricity" was the subject of a paper by Dr. Charles Rea Dickson, president of the association.

Next on the progran was a paper by Dr. G. Herbert Burnham of Toronto, on "Electricity in the Treatment of Certain Diseases of the Eye."

Dr. Robert Newman of New York presented a paper on "Electricity in Genito-Urinary Diseases." Dr. G. Betton Massey spoke on "Treatment of Malignant Growths by Means of Electricity."

A paper by Dr. Louis A. Weigel, of Rochester, on "Orthopædic Uses of Electricity," was followed by a paper by Dr. Rockwell on "Functional Diseases of the Nervous System Treated by Electricity."

President Dickson's Address.

President Dickson delivered his annual address, a part of which is as follows:

"For many years past the thoughts of those who are interested in the many branches of this wondrous subject, electricity, have turned to the city of Buffalo, and it has been the Mecca of the Electric Pilgrims. On its outskirts the wildest dreams of the Arabian Nights have been outdone. Sciene, ever triumphing over nature, has harnessed that most beautiful of all nature's handiwork, and as though by the subtle touch of the wand of a magician, the very country has been transformed, and solitary fields have become veritable hives of human industry, the outcome of the mighty power of Niagara transformed and transmitted. Massive factories are run on every side where but a few short years ago were found naught but vacant lots. To us, witnessing it for the first, it is a milestone of progress, illustrating man's ingenuity, the triumph of his brain. Buffalo is truly the electrical city of the age."

"Surgery," said Dr. Dickson further on in his address, "is being divided and subdivided until at one time we feared that we were to be confronted with an appendix surgeon. Our patients are reaping the benefit of all this."

After giving briefly a history of the association and its growth during the eight years of its existence, Dr. Dickson concluded his exceedingly interesting address as follows:

"A rock we must avoid is that on which many a stronger society than our own has come to grief, the clique, and the furtherance of personal ambition or personal designs be shunned."

Many suggestions embodied in the address were referred to the executive council of the association. An invitation to the association to visit the storage battery of the Buffalo Railway Company was sent by Supt. Danforth at the request of Mayor Diehl. The storage battery is the largest in the world, and the members of the association accepted the invitation with thanks, and made the trip in special cars, sent by Mr. Danforth. The power-house is a wonder and has three separate plants. 1st, its own dynamo; 2d, for the light supplied from the company in Niagara Fall, and 3d, that great storage battery. It was a great treat for the members.

Exceedingly tasteful badges have been prepared for the members and officers of the American Electro-Therapeutic Association. For members the badges are of bronze, and for officers they are of gold. A buffalo forms the pin, from which depends from a ribbon a triangular pendant, bearing the name of the association, the date and the name of the convention city. The officers have their badges depending from yellow ribbons, the members from red.

In the Evening.

Dr. Lucien Howe entertained the men of the association at the conclusion of the business meeting. A smoker was given at Dr. Howe's home, corner of Delaware avenue and Huron street, which was largely attended, and most of the officers and faculty of the University of Buffalo were present. It was a friendly social time and was varied by music, speeches and supper.

Officers Elected.

At the executive session the following were elected as the officers of the American Electro-Therapeutic Association:

President—Dr. Francis B. Bishop, of Washington

First Vice-President—Dr. Ernest Wende, of Buffalo; Second Vice-President—Dr. W. H. White, of Boston; Secretary—Dr. John Gerin, of Auburn; Treasurer—Dr. Richard T. Nunn, of Savannah, Ga.

Executive Council—Dr. Robert Newman, of New York, and Dr. G. Betton Massey, of Philadelphia, three years; Dr. A. D. Rockwell and Dr. William J. Morton, of New York, two years; Dr. Charles R. Dickson, of Toronto, and Dr. Frederick Shavoir, of Stamford, Conn., one year.

The next Ninth Annual Meeting will be held in Washington, D. C., on September 19th, 20th and 21st, 1899.

Third Day, Thursday, September 15th.

At the executive session a vote of thanks was tendered to Dr. Wende, Chairman of the Local Committee of Arrangements; to the Buffalo Commercial for its kindness in publishing the preliminary news of the association; to Dr. Howe for his entertainment last evening; to Mayor Diel, to the Buffalo Railway Company, Buffalo Historical Society, Fine Arts Academy, to the president and secretary of the association, and Dr. Newman of New York, and to the press generally.

The congratulations of the American Electro-Therapeutic Association were extended to the University of Buffalo for its progression in establishing a chair of electro-therapeutics in the medical college.

A general vote of thanks was also adopted, expressing the association's deep appreciation of the courtesy and hospitality extended to the members during the convention in Buffalo.

Scientific Session.

It was 10 o'clock when the executive session adjourned and President Dickson called the scientific session to order. The first two papers on the program were read by title only. They were both by Dr. Georges Gautier of Paris, France, the first of "The Hydra-Electric Bath with Sinusoidal Current in Diseases," the second on "The Use of the Hot Air and Light Bath in Diseases."

A paper not on the program was read by the newly-elected president of the association, Dr. Francis B. Bishop of Washington, on "Alternating Dynamo Currents."

Dr. Margaret A. Cleaves of New York, read a paper on "The Electric Arc Bath."

A paper by Dr. J. H. Kellogg of Battle Creek, Mich., on "The Electric Light Bath," was read by the title only. The next paper was by John J. Carty of New York, a well-known electrical engineer, on "Some Suggestions on the Possibilities of Cataphoresis." Mr. Carty gave a short, practical paper which was very interesting.

A paper by Dr. G. Herbert Burnham of Toronto, Canada, on "Electricity in the Treatment of Certain Diseases of the Eye," was read by title.

Then came a paper by Nikola Tesla, the far-framed electric seer. The paper was read by Dr. White of Boston, The subject

was "A High Oscillator for Electro-Therapeutic Purposes." It was received with the closest attention and was one of the most interesting papers presented during the convention. Mr. Tesla's paper was the last paper read before the association, the remainder of those on the program being read by title as follows:

"The Effect of High Tension Discharges upon Micro-organisms." Drs. J. Inglis Parsons and C. Slater, London, England.

" The Action of X-rays upon Tuberculosis"—Dr. J. Bergonie, Bordeaux, France.

"Two Years of Practice in Radiotherapy" —Dr. George Guatier, Paris, France.

"The X-rays as a Defence in a Murder Trial"—Dr. Frank W. Ross, Elmira, N.Y.

"X-rays Burns"—Dr. Wilber H. Harris, Toronto, Canada.

"Experience with the X-Ray"—Dr. N. C. Morse, Eldora, Ia.

"A New Electric Light for Diagnostic Purposes"—R. G. Brown, E.E. Brooklyn, N. Y.

"Surface Electrodes: How They Should be Made. Connector Cords: How They Should be Made and Insulated"—R. G. Brown, E.E. Brooklyn, N. Y.

Dr. Newman of New York and Dr. Nunn, of Savannah, Ga., were appointed a committee by the president to conduct the president-elect, Dr. Bishop of Washington, to the chair. Before turning over to his successor the gavel and other insignia of office, Dr Dickson took occasion to thank the association for its kindness and courtesy to him during his term of office. His little speech was very grateful and sincere, and was received with hearty demonstrations of approval.

Dr. Bishop spoke of the pleasure it afforded him to take the first place in the association, at the head of the governing body. He said that he deeply appreciated the honor that had been shown him and asked for the hearty co-operation and help of all the members.

Sbortly after noon the new president of the association declared the eighth annual convention of the American Electro-Therapeutic Association closed.

Much satisfaction was evinced over the re-election of Dr. John Gerin of Auburn, as secretary of the association. Dr. Gerin has been a remarkably successful secretary, and his retention in that important position speaks well for the future of the association.

Steamboat Excursion and Reception.

The afternoon was devoted to an excursion and reception, under the direction of the local committee of arrangements. The Huntress left the foot of Ferry street at 2.30 o'clock, taking the members of the association down Niagara river, around Navy and Buckhorn Islands, to the site of the Pan-American Exhibition, then to the Island Club, where a reception was held, followed by a dinner. The return trip was so arranged as to get the members back to Buffalo that evening before 9 o'clock. But the majority of the members went to Niagara Falls, where rooms were engaged at the International Hotel.

Friday, September 16th, was enjoyed at Niagara Falls as the fourth day in a semi-official way. The International Hotal in Niagara Falls is now much improved under the able management of Mr. S. Greenwood who has brought its standard to a first class hotel in every way, and made the members of the association very comfortable.

The pleasure of sight seeing at Niagara Falls was so immense, that it can not be described, it must be lived, it can not be sketched. There were excursions by the great Gorge Railway on both sides of Niagara River, Canada and the United States to Lewiston. The great panorama from the observation tower, the parks, rides, the sail on the Maid of the Mist, a visit to the power house of the Hydraulic Company, whose turbines and horizontal, with a dynamo on each end of the shaft, etc., all of these afforded great pleasure, also did the visit to the power house of the Niagara Falls Power Company, which supplies power, heat and light. The Chief Engineer, Dr. Coleman Sellers, personally conducted the company through the establishment and into its subterranean depths, explaining everything. The sights were so attractive and overwhelming that some continued the sojourn several days at the International Hotel.

Poisoning with Bismuth.

Hare, in The Therapeutic Gazette, states that many years ago it was the custom of teachers of materia medica to point out that bismuth was capable of producing poisoning with gastro-intestinal inflammation; later it was found that this substance never produced such symptoms unless it was contaminated by arsenic; and finally, it remained for Villemin and others to point out that it was capable of producing chronic poisoning with the formation of black sloughs in the mucous membrane of the mouth and gastro-intestinal tract, desquamative nephritis and albuminuria. Still more recently in the Centralblatt fur Innere Medicin for March 5, 1898, there are abstracts of two cases in which poisoning followed its use. In one of these more than

an ounce of a ten per cent. solution of airol with equal parts of glycerin and olive oil was introduced into a cold abscess after it had been evacuated. Three days later the patient had severe stomatitis and the buccal mucous membrane was black in color. Although the emulsion was withdrawn from the abscess cavity, this blackening of the mucous membrane persisted for two weeks. In the other case, a man took fifteen to thirty grains of bismuth subnitrate, and shortly after an eruption developed, resembling that of scarlet fever. This lasted four or five days, and the skin then came away in shreds resembling desquamation, this being particularly noticeable upon the hands and feet.

The second case does not appear to us to be definitely one of bismuth poisoniug. It would seem to us to be rather one of the dermatites, occurring by coincidence, perhaps, as a result of the locking up in the bowel by the action of the bismuth of some toxic material. Perhaps it was a case of dermatitis exfoliativa, which in its mild form is sometimes called erythema scarlatiniform.

Cystitis and Urine Infection.

Dr. Max Melchior in his book on "Cystitis and Urine Infection" (New York Medical Record, July 30th, 1898,) concludes a paper as follows:

1. Every cystitis is due to microbes, with the exception of rare poisoning with chemical substances. 2. In general, we find in the urine of cystitis a pure culture of a single species, generally in large amounts. 3. The bacillus which is found most frequently in cystitis is identical with a very common intestinal parasite, the bacterium coli comune; it is pyogenic and infectious, and of varying virulence. 4. In the urethra, the male prepuce, and the vagina pathogenic bacteria are frequently found—bacteria which when conveyed into the urinary bladder can give rise to a cystitis. 5. The microbe itself does not give rise to cystitis; still there is a bacterium—proteus of Hauser, which by simply entering the urinary bladder may give rise to a cystitis. 6. The microbes can produce a cystitis only when the urinary bladder, on account of the influence of various predisposing circumstances, especially retention or trauma, is made susceptible to the infection. 7. Retention of urine, as well as trauma pure and simple, is incapable of producing a cystitis. The microbe is always the deciding cause. 8. The varying nature of the cystitis depends upon pre-existing lesions and upon the character of the substrata in connection with the various peculiarities of the bacterium, among which the virulence must be rendered prominent. 9. In every cystitis the urine contains pus cells, but in varying amount; the existence of a catarrhal cystitis is to be looked upon as doubtful. Even non-pyogenic microbes may cause a suppuration of the urinary bladder. 10. The ammonuria may be a necessary condition for the occurrence of a cystitis; most frequently, however, it is but a subordinate phenomenon which appears in the course of cystitis or remains away altogether. The majority of cystitis cases are acid. 11. Besides tubercle bacilli, and acid cystitis may depend upon the bacterium coli commune, the streptococcus pyogenes, and on rare micro-organisms (gonococcus of Neisser, bacillus typhi abdominalis.) If the sterile urine does not produce any culture upon the ordinary media, the great probability is that a tuberculous cystitis exists. 12. There exists a real gonorrheal cystitis, caused by the gonococcus of Neisser. 13. The urinary fever is partly due to transmission of the urinary microbes into the blood; partly—and certainly more frequently—to an absorption of the soluble toxins which occur in the urine. 14. To prevent a cysitits, we must not only be certain of a thorough asepsis at the urethral orific, but we must also irrigate the urethra with boric acid solution. 15. In the local treatment of cystitis nitrate ef silver is the sovereign remedy.

Qualities of a Gentleman.

The true gentleman carefully avoids whatever may cause a jar or jolt in the minds of those with whom he is cast; all clashing of opinion, all collision of feeling, all restraint, or suspicion, or gloom, or resentment; his great concern being to make everyone at his ease and at home. He has his eyes on all his company; he is tender toward the bashful, gentle towards the distant, and merciful towards the absurd; he can recollect to whom he is speaking, he guards against the unreasonable allusions or todics that may irritate; he is seldom prominent in conversation, and never wearisome. He makes light of favors while he does them, and seems to be receiving when he is conferring. He never speaks of himself except when compelled, never defends himself by a mere retort; he has no ears for slander or gossip, is scrupulous in imputing motives to those who interfere with him, and interprets everything for the best. He is never mean or little in his disputes, never takes an unfair advantage, never mistakes personalities or sharp sayings for arguments, or insinuates evil which he dare not say out.

Two Cases of Syme's Amputation.

F. D. Smythe, M. D., (Memphis Medical Monthly, Sept., 1898) reports two interesting cases of Syme's amputation. The first case was that of a negro brakeman in the employ of the Y. & M. V R. R., who was injured near Lula, Miss., July, 1897, by a car wheel passing over his foot. He was attended by local surgeon and forwarded to the hospital here for further treatment. Examination showed the soft parts badly lacerated, the tarsal and metatarsal bones crushed beyond hope of preservation.

Patient was chloroformized. The lower extremity from the knee down was surgically claansed. It was questionable whether the condition of heel flap justified a Syme, and but for the many advantages of such a stump to a laboring man, the lower third would have been selected for operation. An observation of cut No. 1 shows the wisdom of choice in the case. The technique as given by Syme was not deviated from. I can do no better than to incorporate in this article Syme's description of the operation:

"The incision must be properly made to warrant hope of good result. A transverse incision should be carried across the sole of the foot, from the tip of the malleolus or a little posterior to it (rather nearer the posterior than the anterior edge of the bone), to the oppsite point on the inner side, which will be rather below he tip of the internal malleous." Dissect he tissues of the sole back, hugging the bone until point of heel is turned when the Achilles tendon is cut. The extremities of the incision are now united by a transverse one across the instep, the joint opened, the lateral ligaments divided, completing the dislocation. The lower ends of tibia and fibula are then cleared, the malleoli and articular surface removed by saw, the vessels secured, generally three or four requiring ligature. The posterior flap is then brought up and held by silk-wormgut sutures. Drainage is effected by gauze inserted from either side to bottom of cavity, which cannot be satisfactorily accomplished by incision through heel flap, as is recommended by the textbooks. The stump is covered with a liberal supply of

No. 1
Illustrating Dr. Smythe's Report of Two Cases of Syme's Amputation.

absorbent gauze and cotton, snugly bandaged, completing the operation.

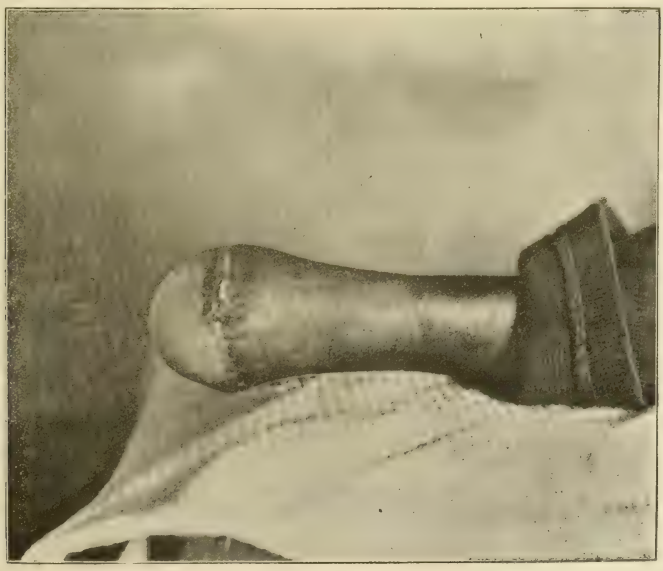
In this case we had some sloughing. The flap fell back, gangrene supervened, and for many days it looked like higher amputation could not be avoided. The wound was treated by wet dressings of carbolized cloth until sloughing ceased. Granulation was now rapid, the flap was brought forward and retained by suitable bandaging from day to day until coaptation was obtained. About nine weeks were required to accomplish this result. The patient insisted daily for over a month upon reamputation. On several occasions I thought we should be compelled to carry out his wishes.

The man is now engaged as flagman, and has a stump well protected, painless; locomotion slightly impaired. Dr. Buford, his family physician, saw to the fitting and adjustment of an artificial limb. The instrument is made by B. T. Round, of Kansas City. It is a very serviceable one and is well shown in the cut. I am informed by Dr. Buford that the cost of such an apparatus is $75; this I think rather a high price, though the apparatus meets admirably the indications, shown by this man satisfactorily meeting the requirements of a flag-man

Case II.—Cut No. 2 shows stump of second patient operated on, taken one month after operation. This man had extensive tubercular disease of the tarsal and metatarsal bones of three years' standing. The same technique was carried out as in Case I. We did not experience any difficulty, however, in getting union. Four weeks after operation the man returned to his home in Arkansas with an ideal stump. He can have artificial appliance adjusted at any time should his occupation demand increase of walking facility.

Syme's amputation possesses advantages over either of the other operations about the ankle. No bone is left to necrose or give pain by becoming displaced. Much less time is required in after treatment, and less demand made upon the healing power of the patient. Experience has shown that no stump is as serviceable as that resulting from a Syme. The main thing to consider in performing the operation is the important fact that the bone must be *hugged*, otherwise the posterior tibial will be divided before its bifurcation, and the principal artery of the flap, the internal calcaneal of the external plantar, be lost, making the operation a failure.

The operation is by no means as easily performed as the description of it would lead one to believe, but the end justifies the means.



No. 2

Illustrating Dr. Symthe's Report of Two Cases of Syme's Amputation.

Is the Use of the Rectal Sound Scientific?

"Is the Use of the Rectal Sound Scientific?" is the title of a paper, read by Dr. Thos. Chas. Martin before the Ohio State Medical Society, meeting in Columbus on May 5. He said:—"The employment of the sound within the rectum is not consistent with the mechanic principles upon which the practice of surgical sounding is based.

"Sounding as a method of diagnosis requires three conditions: (1) that the tube to be sounded must have a recognized limit of destensibility; (2) that its mobility in the direction of its axis must be inappreciable and (3) that there do not exist at irregular intervals normal or anatomic obstructions in its channel sufficient to arrest the progress of a sound.

"These conditions obtain in the urethra, which is fixed from extremity within a mass of tissue which firmly supports it when that organ is in a situation for the practice of the manoeuvre. The rectum, on the contrary, answers negatively to each of these three propositions.

"Eight inches of the rectum's length are not fixed but are anchored loosely in the abdominal cavity; the lower-most inches is the only portion muscle-bound. The normal range of distensibility of the rectum is from zero to three and a half inches and a definite calibration for sounding is impossible. The average diameter of rectal sounds is about one inch. Two thirds or three fourths of the rectum's expansibility must then of necessity be sacrificed before rectal sounding will produce any definite evidence of stricture.

"In case there exists a constriction of this gut the element of mobility of the rectum in the direction of its axis enters into the problem. The range of such movement of the gut is determined by the lenght and elasticity of its attachments. A bulb-tipped sound entering the rectum and coming in contract with a contraction presenting an aperture of lesser diameter than the bulb will carry that part of the gut above its normal situation to a point where the limits of length and elasticity of its attachments arrest the movement, at which time the sound will be stopped or else will enter, dilate and pass the stricture, or perhaps, puncture the gut.

"When the sound encounters an obstruction it may be observed, perhaps, that the proximal border is five inches long from the anus. The sound may be passed but when it is tentatively withdrawn and the shoulder of the bulb engages the upper border of the obstruction it may carry it downdard until arrested by the gut's limit of displaceability. In such an instance the exposed length of the shaft of the sound if now measured indicates that the most distant border of the contraction instead of being more than five inches is but three inches from the anus.

"The rectal valves afford an effectual obstacle to the passage of the bougee and supply evidence which simulates that of stricture when the sound is used."

In conclusion the writer states that "an analytic survey of the anatomy of this part and study of the mechanics of surgical sounding compel the conclusion that the enormous normal distensibility of the rectum, its great susceptibility to upward and downward displacement and its normal valvular partitions are significant that the customary method of sounding the rectum for the diagnosis of stricture is uncientific, is unprofitable as a diagnostic measure, and is extremely hazardous to the life of the patient."

Flies as Carriers of Typhoid Fever.

The Boston Medical and Surgical Journal in its issue of Sept. 29, '98, calls attention to the commission that was lately appointed to visit our military camps and inquire iuto the cause of the epidemic of typhoid fever in those camps. This commission inspected the camps at Chicamauga, Huntsville, Fernandina and Jacksonville, and as a result of their investigation, reported that in their opinion the common house-flies *musca domestica*, which swarmed in all the camps and had unimpeded access to the excreta and ingesta of the soldiers, were the active and immediate agents for the spread of this disease among the troops, the disease having been originally brought to the camps by the volunteers from their homes. The commission give in their report certain reasons for entertaining this opinion. The opinion at present has merely the weight of a plausable theory. No positive proof is adduced, and no control experiments have been made to support the theory. The reasons given for entertaining the theory are sufficient, and the theory in itself is sufficiently plausible to make such experiments, which should not be difficult, desirable.

The same theory was adduced to account for the scattered cases of cholera which occurred iu the city of New York, in September of 1892, when that city was quarantined against the epidemic of cholera then prevailing in Europe. But this theory in regard to cholera was based upon the positive results of careful laboratory experiments made in Europe by Simmonds and Sawtschenko, experiments which showed, not only that the house-fly might be a carrier

and disseminator of the cholera bacillus, but also that those bacilli are taken into the body of the fly, pass through it without loss of their active properties and, moreover, in all probability, actually multiplying during their sojourn there.

As above said, it would be quite worth while for some of our bacteriologists to apply such experiments and seek for such proof in regard to flies as carriers of typhoid fever.

This proposition to the spread of typhoid among the volunteers by means of flies, it should be remembered, has no real bearing upon the question of fixing the responsibility for the high percentage of sickness among the volunteers and the neglect of camp hygieue. It does empathize the fact that there was an astonishing neglect of camp hygiene in many instances. The measure of responsibility for the results—as between Congress, the War Department (which includes the Secretary of War, the Quartermaster's Department, the Medical Department, etc.), and the soldiers themselves—this still remains undetermined and unaffected by the presence and activity of the domestic fly. Of course, in so far as this responsibility is fixed upon Congress the "intelligent voter" himself must assume it.

Sanitary Precautions in Michigan.

The New York Medical Journal, September 24, 1898, comments favorably on the vigilant activity of Michigan State Board of Health and of its indefaticable secretary, Dr. Henry B. Baker. The Journal says:

We are reminded anew of their excellent work by recent correspondence between Dr. Baker and the secretary of the Illinois State Board of Health, Dr. J. A. Egan. On August 31st Dr. Egan wrote to Dr. Baker to the effect that he had been informed by the general baggage agents of railroads running north out of Chicago that they were receiving daily from southern and eastern lines bodies of persons, presumably soldiers, who had died of typhoid fever; that the coffins in nearly every case were of the most inferior kind; that there was no undertaker's certificate as to the proper condition of the body, in accordance with the rules for the transportation of the dead, and that the railroads were asking him for instruction in the matter. Dr. Egan remarks that, of course, the transportation of the bodies under such conditions is dangerous to the public health, but he adds that for certain reasons he is loath to take decisive action until he has learned the views of the boards of adjoining States. Dr. Baker telegraphed: "Rules of general baggage agents should be enforced every time," and on September 2d he wrote to Dr. Egan giving it as his opinion that the reason mentioned by correspondents for permitting carelessness in the transportation of the dead, namely, that public sentiment was so thoroughly aroused, was not a good one. "Public attention being now well aroused," he said, "there is an excellent opportunity for useful education of the people generally as to the care necessary to be observed relative to dead bodies for the purpose of guarding the health of the living. Now is the time for gaining the attention of the public to what is required for the safe transporting of the dead. The rules of the General Baggage Agents' Association are wholly in the interest of public health, and should be rigidly adhered to and upheld by all of us who are in the public-health service."

It seems that the law in Michigan requires such notice to be given to the health officer or representative of the local board of health of the place to which a body is sent as will enable him to supervise the receipt of the body. At least, this is true as regards the body of a person who has died of "any dangerous communicable disease," and the Michigan board has declared typhoid fever to be such a disease. Dr. Baker remarks that it can not add much to the work of those concerned in transporting dead bodies to get the permit of the health officer of the point of destination and give him proper notice, and it ought always to be done, for it makes it possible for him to take the proper action to guard the interests of the living in his jurisdiction.

Dr. Baker refers to a circular issued by him in August, under the title of Caution for the Prevention of Typhoid Fever, the substance of which is as follows: As typhoid fever is particularly prevalent in the months of August, September, and October; and as drinking water comtaminated with the germs of the disease is believed to be the commonest vehicle of its conveyance, prudence dictates that all drinking water not known to be above suspicion should be boiled before it is used, and cooled in some place where the typhoid fever germs can not gain access to it. The germ of this disease is now known to be present in the discharges from the bowels, in the urine, and in the spleen, and probably it pervades the entire body. These germs are not rapidly destroyed by drying, and, as typhoid may always be spread directly and indirectly from a person having that disease, all discharges from his body should be disinfected, particularly the urine, and all articles of clothing, etc., soiled by him should be

thoroughly disinfected. Public notice of every infected place should be given by placard on the premises, and otherwise if necessary, so that no person may unguardedly drink water or take food from a source likely to be contaminated with the germs of the disease.

Dr. Baker closes his letter to Dr. Egan by referring to an account, in a pamphlet relatiue to typhoid fever in Michigan in 1895, of the spread of the disease from a corpse, and to proofs that in recent years many lives have been saved in Michigan by restricting typhoid fever. He may well take pride in his share in the good work. "I think it is about time," he remarks, "that other States were taking up this work. I earnestly hope that Illinois will fall into line and stand shoulder to shoulder with Michigan for the restriction of typhoid fever, as well as all other dangerous communicable diseases."

Chronic Ankylosing Inflammation in the Vertebral Column.

Baumler has published the history of a case of this kind in which the hip joints were also involved, the latter affection preceding that of the spine (British Medical Journal), The patient when first seen had both hips ankylosed, the head was bent forward and both active and passive movements in the upper cervical spine were very limited and painful. The cervical vertebræ themselves appeared to be thickened. There was no evidence of syphilis or tubercle. Considerable improvement followed upon rest in bed in a horizontal position. Some eighteen years later the patient was in good health but the cervical spine remained almost immobile and the ankles, knees, and one shoulder were involved as well as the hips. The author has often noticed that the maintenance of unusual positions leads to pain and tenderness in the parts in question. This patient has to sit and write at a desk, and the ankylosis of the hips led to an unusual position in the spine. To this the author would attribute the affection of the spine. The carrying of heavy weights on the shoulders may bring about a similar condition. Severe infective arthritis may lead directly to this affection of the vertebral column or indirectly as in the above case. Baumler then refers to a case reported by Brodhurst in which there was repeated gonorrhœal arthritis and an ankylosis was eventually developed between tqe vertebræ as in other parts. Affections of nerves and muscles may also lead to this ankylosis owing to the change in the static relations of the vertebral column. The resulting kyphosis may be mistaken for a tuberculous spondylitis. The author draws attention to the importance of rest in the early treatment of this affection.

Apomorphine and Its Uses.

Dr. Samuel A. Visanska (New York Medical Record, July 2, 1898) says:

In puerperal convulsions no drug is so highly lauded as apomorphine given subcutaneously. It has almost taken the place of morphine and other narcotics, and its action here depends not upon the emetic powers, but on the general relaxation of all the muscles; and I contend that as long as there is relaxation of the system a convulsion cannot take place; therefore, the drug should be used when we have a case of threatened puerperal convulsion, or if we arrive at the patient's bedside during one of these unsightly and distressing attacks. The dose should not be large enough to produce emesis, but just enough thoroughly to relax the system. I generally begin with gr. 1-60–1-40 subcutaneously, and if the desired effect is not produced in thirty minutes the dose is repeated.

In epilepsy a hypodermic of apormorphine will prevent or cut short an attack, according as it is given before or during the fit. It can also be used as an antispasmodic in many other diseases.

Lactation Atrophy of the Uterus.

Vineberg, in the Medical Record, concludes a good paper as follows:

1. Modern researches tend to prove that post puerperal involution consists chiefly in a retraction and contraction of the individual muscle fibres, whereby the whole uterus is reduced in size. 2. When involution goes to its full completion the uterus is reduced to a size smaller than that of the nonparous organ. 3. This condition of complete involution is known as post-puerperal hyperinvolution. It is principally seen in nursing women, and from this circumstance has received the cognomen lactation atrophy. 4. The so-called lactation atrophy is a moral and desirable condition. It is temporary in its duration, but very rarely under favorable circumstances may become permanent. 5. When the patient is unable to perform the function of lactation it is the duty of the physician to endeavor to bring about hyperinvolution by other means at his disposal. An observance of this course will prevent many a woman from developing a host of gynecologic affections which frequently result from imperfect involution.

Surgical Interference in Cerebral Disease.

Dr. Fisher (New York Medical Journal, April 16, 1898,) suggest the following as indications for operation:

1. Fracture of the skull, causing compression with resulting paralysis, epileptic seizures or coma. 2. Meningeal hemorrhage, traumatic or occurring in pachymeningitis hemorrhagica. 3. Tumors of the brain when situated near the cortex of the brain, or even in the cerebellum, but not when deeply situated or at the base. When the tumor is not thought to be a removable one a partial operation may be indicated, as the removal of a large area of the skull often relieves certain marked symptoms of tumor, as vomiting, headache, and convulsions. 4. Localized epileptic seizures of the so-called Jacksonian type. I would include in this class of cases, whether due to injury or arising from unknown causes, that is, so-called idiopathic epilepsy, if limited to special parts of the body, as the arm, leg, or face, or all three, if only one side of the body is involved. In such cases I would advise the excision of these cerebral centers. This, indeed, results in paralysis, perhaps a permanent form, but in many of these patients we have already a certain degree of paralysis, and in that case we simply increase a previous disability. 5. Cerebral abscess, and especially in the form most commonly presented to us, that following otitis media. I will not include under this head operations in microcephalia or in infantile cerebral hemiplegia with epilepsy, although in some cases, owing to the otherwise hopeless character of these conditions, I am in favor of operative interference.

READING NOTICES.

A Perversion of the Truth.†

The Deadly Parallel Exposes an Act Unworthy of a Respectable Manufacturer.

Fictitious Statement sent out to the Medical Profession and Drug Trade by the H. K. Mulford Co., of Philadelphia.

CALIFORNIA STATE BOARD OF HEALTH.

The antitoxin used in California is made in this country; and after considerable investigation and trials of the German and French preparations, we are giving our preference to the American production. . . The antitoxin now used by the Board is that of H. K. Mulford Company, Philadelphia, Pa. The American product is put up in better form for transportation and handling, which is of itself an important item. The Concentrated "Extra Potent" (500 units to each c. c.) is the best.—J. H. Davisson, Los Angeles, Secretary California State Board of Health, in Report on Diphtheria Antitoxin.

†Therapentic Notes.

Statement as it Actually Appeared in "Report on Diphtheria Antitoxine," by the then President of the California State Board of Health.†

Most of the antitoxine used in California is made in this countyr; and after considerable investigation and trials of the German and French preparation, we are giving our preference to the American production; and most of the antitoxine used by the Board is from the laboratory of Parke, Davis & Co. The American product is put up in better form for transportation and handling, which of itself is an important item. The stronger preparations of antitoxine are the best, and the average curative dose is (when administered early) 1,000 units (Behring's standard), and in severe cases, or adults, or advanced cases, or croup, 1,500 units should be given; and these doses may be repeated every twelve to twenty-four hours till 5,000 or 6,000 units are given in a single case. Two hundred units is an average immunizing dose. The usual antiseptic precautions should be observed, and no more care is required in the administration of the antitoxine than in other "up to date" procedures in medicine and surgery. The injection should be made under the skin in the cellular tissue, and not into the muscular tissue, and over the chest, sides, or back, according to circumstances; but the dose being large, there is often considerable reaction and soreness at the site of the injection, which interferes with movements or handling for a day or two. For immunizing, an ordinary hypodermic syringe may be used, and the deltoid region is best, as it ordinarily is, for injections for any purpose.

Dr. Davisson's Letter of Protest in Journal of the American Medical Association, May 28, 1898, pages 1301 and 1302.

Los Angeles, Cal., May 18, 1898.

To the Editor:—In a forty page booklet entitled, "The Present Status of Diphtheria Antitoxin Serum," issued in large editions by H. K. Mulford & Co., of Philadelphia and Chicago, on page 31 appears a testimonial in which is a wilful change of name of the firm mentioned, which alleged testimonial reads as follows:

†Page 271, Fourteenth Biennial Report of the State Board of Health of California.

"California State Board of Health. The antitoxin used in California is made in this country, and after considerable investigation and trials of the German and French preparations, we are giving our preference to the American production. . . . The antitoxin now used by the Board is that of H. K. Mulford Company, Philadelphia, Pa. The American product is put up in better form for transportation and handling, which is of itself an important item. The concentrated 'Extra Potent' (500 units to each c. c.) is the best.—J. H. Davisson, Los Angeles, Secretary California State Board of Health, in Report on Diphtheria Antitoxin."

Permit me to say that I was never secretary of the California State Board of Health, and in the only report which I made upon antitoxin while a member of the said Board, I did not have occasion to mention the product of the above named firm. I enclose said report (which was published in Transactions of California State Board, and is a part of the official records of the State), which tells entirely a different story. As a member of the American Medical Association since 1877, I dislike to be placed in a false light before my confréres to satisfy mercenary ends of any over-zealous firm.

I am very truly,

J. H. Davisson, M. D.,
Ex-Pres. California State Board of Health.

"Explanation" made by the H. K. Mulford Co., in Journal of the American Medical Association, p. 37, July 2, 1898.

Philadelphia, June 16, 1898.*

To the Editor:—We note the letter recently addressed to your Journal (May 28, p. 1301) by Dr. J. H. Davisson of Los Angeles, Cal., ex-president of the State Board of Health, relative to an irregular use of a recent reprot made by him, which was published in our antitoxin brochure about a year ago.

It was far from our intention to cause Dr. Davisson any annoyance, or to make any improper use of his name. It was not our intention to have it appear that the Doctor personally endorsed our product, but that the State Board of Health of California discriminated in favor of American antitoxin, and since, at the time our brochure was published, we were supplying, and have continued to supply, the California State Board of Health with Mulford's Concentrated Antitoxin, the statement as published in our bronchure is correct.† Our copy supplied the publisher, incorporated the above with a quotation from Dr Davisson's report. Unfortunately, our instructions regarding the use of the bracket were not carried out. The article should have read according to our copy as follows.†

California State Board of Health.

The antitoxin used in California is made in this country and after considerable investigation and trial of the German and French products, we are giving our preference to the American production. The American product is put up in better form for transportation and handling, which is of itself an important item. [The antitoxin now used by the Board is that of H. K. Mulford Co. of Philadelphia.† The concentrated "Extra Potent" (500 units to each c.c.) is the best.]

We extremely regret that the bracket was omitted in placing this matter in type. Certainly we did not intend to have it appear that our product was personally endorsed by Dr. Davisson, but the fact that the California Board of Health was being supplied with Mulford's Antitoxin at the time our brochure was published, makes the statement as appears in our brochure, with the exception of the personal endorsement of Dr. Davisson, absolutely correct.

Thanking you in advance for the publication of this explanation, we are

Very truly yours,

H. K. Mulford Company.

Statement of Dr. J. R. Laine, (San Francisco, July 12th, 1898,) Ex-Secretary and Executive Officer of the California Board.

Dr. J. R. Laine,
Office, Fourth Floor Crocker Bldg.
Hours, 2 to 4
Telephone, Maine 5064
Residence, 920 Sutter Street
Telephone, East 948.

San Francisco, Cal., July 12, 1898.

This will certify that the California State Board of Health did not at any time during the seven years ending April, 1897, endorse, nor adopt, officially or otherwise, the diphtheria anti-toxin manufactured by H. K. Mulford & Co., of Philadelphia.

J. R. Laine, M. D.
Ex-Secty. & Executive Officer of the Board.

*Please note this date.—Parke, Davis & Co.

†Underscoring lines ours.—P., D. & Co.

Resolutions Passed July 12, 1898, by the Present Board.

San Francisco, July 12, 1898.

Whereas, It has come to our knowledge that in the official report made by Dr. J. H. Davisson, Ex-President of the State Board of Health of California, he made favorable mention of the Anti-Diphtheritic Serum manufactured by Parke, Davis & Co.; and

Whereas, We find that the H. K. Mulford Co. have seen fit to appropriate this report substituting the name of H. K. Mulford & Co. for that of the aforesaid Parke, Davis & Co.;

Therefore Resolved, That this Board deprecates such conduct on the part of H. K. Mulford Co. inasmuch as their act amounts to a falsification of our records.

I hereby certify that the above is a copy of a resolution adopted by the State Board of Health of California at a meeting held in San Francisco, July 12th, 1898.

W. P. Mathews, Secretary.

The External and Internal Use of Xeroform in Dermatology.†

The author has used Xeroform in his clinic for more than a year, and believes that he is in a position to pass judgment upon its therapeutic value. He has treated 178 patients with it externally, and 45 patients internally; and since 13 of these latter cases belonged to the first class also, the entire number of cases treated was 210.

The external cases were party superficial diseases, partly clean incised and operative wounds, and partly suppurations and necroses of the skin.

I. Superficial diseases:

Balanitis	41	cases.
Moist eczemas	30	"
Traumatic erosions of the genitals	8	"
Eczema of the anus and nates [13 of them treated internally also]	15	"
Iodoform eczemas	9	"

II. Suppurations and necroses:

Chancroids	47	cases.
Varicose ulcers	11	"
Tuberculous ulcerations of the nose and penis [1 of each]	2	"
Phlegmons of the hand with panaritium	5	"
Suppurating buboes	11	"
Incised furuncles	3	"

III. Clean operative wounds:

Extirpation of dermoid cysts	2	cases
Excision of chancre	4	"
Phimosis operations	8	"
Excision of mollusca fibrosa	4	"
Excision of periurethral false passages	2	"

Considering class III first, the author states that the wounds were sutured, powdered with Xeroform, and according to their seat and size, covered either with Xeroform gauze or simple sterilized gauze, and bandaged. Sometimes straps of the 5 per cent. collemplastrum saponatum salicylicum were used.

All the operative wounds healed by primary intention; there was no trace of suppuration in the sutures.

As regards the suppurative processes, the author can add to the favorable reports made by others the facts that there never occurred under the Xeroform dressing the granulomatous formations leading to pus retention in the panaritiums and phlegmons of the hands, nor the maceration of the epidermis and the artificial eczemas that are so common with iodoform. The same was true of the chancroids. When the layer of Xeroform was washed away daily with lukewarm water, and the powder reapplied, cicatrization occurred on the average in two weeks.

In the extensive varicose ulcers the secretion diminished rapidly; a matter of importance for quick cicatrization. The ulcerated surfaces were powdered with Xeroform, and then covered with the 5 per cent. collemplastrum saponatum salicylicum; the plaster being renewed twice and the powder once in 24 hours. A more frequent application of the Xeroform is not desirable; too firm a crust is formed, which does not permit the secretion to percolate out.

The same precaution had to be observed with suppurating buboes after incision and with furuncles. The abscess cavities were covered with a thin layer of Xeroform, and then packed with Xeroform or simple sterilized gauze. In the tuberculous ulcerations this did better than any other dressing; the torpid, flabby granulations became firm, they lost their œdematous appearance, and so were prepared for more rapid cicatrization.

Xeroform seemed to do best, however, in the wide spread inflammatory affections of the skin accompanied with hyper-secretion, especially in balanitis. It was better than the salicylic powders in that it has no cauterant action, and yet diminished the secretion, removed the obnoxious odor, and rendered the formation of normal epidermis possible. In erosions of the genitals it advantages were equally marked.

Xeroform was equally beneficial in the moist eczemas when these are circumscribed, as on the hands. This is of especial importance; for in public practice this variety of

†Dr. Ehrmann, Lecturer, Vienna. [Abstracted from the Wiener Medicinischen Blatter, No. 22. 1898].

the disease is very troublesome to the physician. He will welcome a remedy that causes a rapid diminution of the secretion and renders the use of ointments possible. Ehrmann formerly employed a 20 per cent. nitrate of silver solution for that purpose; this was not always agreeable to the patient who welcomed the substitution of Xeroform.

Among the local eczemas for which Xeroform seemed especially suited were those of the anus and surrounding regions, more especially because its external application as a dusting powder can be combined with its internal administration.

Acting on the suggestion of Hueppe, who employed Xeroform as an intestinal antiseptic in cholera with great advantage, the author administered Xeroform in several dermatoses that are notoriously accompanied with increased decomposition of the intestinal contents.

The obstinacy of anal eczema is due to the fact that its cause is the abnormal composition of the contents of the intestine that pass out. All individuals affected with it have either habitual constipation, or intestinal atony, or suffer from flatulence. From remaining too long in the intestinal canal the fæces are ash-grey in color, or they have an unusually penetrating smell. Other cases have alternately constipation and diarrhœal stools. In none of these cases can any permanent result be obtained without a suitable treatment of the gastro-intestinal tract. This treatment varies, of course, in every case; regulation of the diet, of the habits of life, of exercise, with abdominal massage, gymnastics, etc., are required; but intestinal disinfection is indicated in all cases. The author formerly employed ichthyol, creosote, and menthol for that purpose; but he was glad to replace them by Xeroform, which has no unpleasant odor or taste, and causes no eructations. He administered the drug in doses of 0.5 gram ($7\frac{1}{2}$ grains) in wafers two to four times a day; and he found that it always effected a diminution of the flatulency, greater regularity of the intestinal evacuations, and an improvement in the condition of the fæces. He gave 13 cases of anal eczema Xeroform internally; in two cases only the constipation remained obstinate, though the flatulence diminished. He, therefore, had recourse to irrigations, abdominal massage, and cascara sagrada. The anal eczema were cured by the internal and external use of Xeroform.

A second group of dermatoses in which an intestinal antiseptic is of importance are the chronic urticarias and dermographism.

A certain number of urticaria patients complain spontaneously of constipation, and for them purgatives, administered for a sufficient length of time, are enough. A much larger number, more especially those affected with dermographism, have normal and satisfactory stools. Yet there is not the least doubt that in these cases also are cases of auto-infection from the intestinal canal, as is proven by the results of treatment.

In some of these cases the usual intestinal antiseptics, salicylate of soda, ichthyol, creosote, menthol, give no results; in two such cases Ehrmann employed Xeroform with success, and now he always commences the treatment with it. Of the 32 cases of urticaria and dermographism that he has treated during the past year, 23 were cured, 7 were improved and disappeared before treatment was concluded. Two cases, that have suffered from urticaria for two and four years respectively, are still under treatment. This is a result that leaves all the other intestinal disinfectants in the shade.

Finally, Ehrmann comes to the conclusion that Xeroform is one of our best and most reliable antiseptics and skin dressings; that its desiccating properties can be used to great advantage in dermatotherapy; and that in anal eczemas and autotoxic dermatoses it is the best of all the intestinal antiseptics.

Accuracy in Thyroid Medication.

During the last few years an increasing amount of attention has been devoted to the use of standardized medicinal preparations and active principles, since it was recognized that by the administration of such preparations only, the physician can depend upon uniform and definite results. Wherever possible the custom has grown of using the active principle of a drug instead of the crude material. Hence when thyroid medication assumed a permanent place in the treatment of certain diseases, attempts were made to isolate the active principle. This substance can now be obtained in the form of IODOTHYRINE, which is a triturate of the active principle of the thyroid with sugar of milk. To obtained exact, uniform and safe results from thyroid treatment, IODOTHYRINE will be found far preferable to the thyroid extracts in the market, since unlike them it contains no decomposing albuminous material, and the proportion of the active ingredient is unvariable. It has been found to act both promptly and efficiently in cases of obesity, goitre and diseases of the skin, and as the physician has to deal with a substance of definite composition, he is enabled to control its effects, so as to avoid any unpleasant or injurious results.

THE SANITARIUM, BATTLE CREEK, MICH.

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J. H. KELLOGG, M. D., Supt., Battle Creek, Mich.

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The disappointment so frequently experienced from the use of intestinal astringents is due to the fact that they are largely absorbed and decomposed before reaching the seat of disease. **Tannopine** is always *prompt and reliable*, because it passes unchanged through the stomach, without causing any disturbance, and its astringent principle is gradually liberated by the intestinal fluids, thus exerting a curative effect down to the lowermost part of the intestines. It has been found of special value in intestinal catarrhs, cholera infantum, typhoid and intestinal tuberculosis.

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Somatose consists of the albumoses derived from *meat*, which are directly absorbed and assimilated without imposing any work upon the digestive organs. It is an ideal restorative and tissue-builder in all acute and chronic diseases attended with emaciation and debility.

Ferro-Somatose contains *iron* in a special organic combination, which is rapidly assimilated and converted into hemoglobine. It is tasteless, readily soluble, does not affect the teeth or produce constipation. Indicated in all anæmic conditions, and in chlorosis.

Lacto-Somatose is composed of the albumoses derived from *milk*, together with an astringent in organic combination. It is pre-eminently a food in gastro-intestinal diseases, especially of children, being readily assimilated, well tolerated, and regulating the functions of the stomach and intestinal canal.

Protargol, *an important advance in the treatment of Gonorrhœa.*

Protargol is a silver proteid compound, unirritating, deeply penetrating, and powerfully germicidal, and is regarded by *Prof. Neisser* as the *best, safest and most rapid anti-gonorrhœal remedy.* Other authorities are equally emphatic in their commendations of its value. In the treatment of affections of the eye, infected wounds, and as a substitute for silver nitrate, it has proved of decided benefit.

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Saunders' Medical Hand-Atlases.

Mr. Saunders is pleased to announce that arrangements have been completed for the publication of an English edition of the world-famous Lehmann Medicinische Hand-atlanten.

For scintific accuracy, pictorial beauty, compactness, and cheapness these books surpass any similar volumes ever published. They contain reproductions of work of the most skillful artists, and their faithful portrayal of the subjects is assured by the eminent physicians and surgeons under whose direct supervision the plates were prepared.

Each volume contains from 50 to 100 colored plates besides numerous other illustrations in the text. Every picture is designed to be an accurate and life-like representation of the part or condition as it exists and is seen by the eye. The colored plates have been executed by the most skillful German lithographers, in some cases more than twenty impressions being required to obtain the desired result and produce the exact effect of delicate shades and tints. Each plate is accompanied by a full and appropriate description, which is printed, for convenience, opposite the plate. The text of the volume consists of a condensed but adequate outline of the subject to which the book is devoted. This obviates the necessity of referring to other treatises for descriptive matter, and makes each atlas a complete handbook of its particular subject.

One of the chief and most valuable features of these atlases is that they offer a ready and satisfactory substitute for clinical observation. Such observation, of course, is available only to the residents in large centers; even then the requisite variety is seen only after long years of routine hospital work. To those unable to attend important clinics these books will be absolutely indispensable, as presenting in a complete and convenient form the most accurate reproductions of clinical work, interpreted by the most competent of clinical teachers.

The great advantage of natural pictorial representation is indisputable. For lasting and practical knowledge, one accurate illustration is better than several pages of dry description.

While appreciating the value of such colored plates, the profession has heretofore been practically debarred from purchasing similar works because of their extremely high price, made necessary by the limited sale and the enormous expense of production. Now, however, by reason of their projected universal translation and reproduction, affording international distribution, the publishers have been enabled to secure for these atlases the best artistic and professional talent, to produce them in the most elegant style, and yet to offer them at a price heretofore unapproached in cheapness. Their very low price will place them within the reach of even the novice in practice.

The great success of this undertaking is demonstrated by the fact that the volumes have already appeared in nine different languages,—German, English, French, Italian, Russian, Spanish, Danish, Swedish, and Hungarian.

The superlative worth of these books is manifested by their remarkable success, as shown in their universal circulation and by the extremely commendatory reviews that they have received.

The same careful and competent editorial supervision will be secured in the English edition as in the originals. The translations will be directed and edited by the leading American specialists in the different subjects. The volumes will be of a uniform and convenient size ($5 \times 7\frac{1}{2}$ inches) and will be substantially bound.

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The Question of Douching in Obstetrics.

Dr. Jardine at the recent meeting of the British Medical Association made the following remarks touching upon this subject:

In an ordinary case *ante partum* douchiug is unnecessary, and in fact is as likely to do harm as good. It will remove the normal secretions of the vagina, which, with their non-pathogenic organisms, are protective. If an antiseptic like corrosive sublimate is used, it will corrugate the tissues, hinder the descent of the presenting part, and render the tissues far more liable to being lacerated. However, under certain conditions a douche is necessary, namely: 1. If there is any purulent or putrid discharge from the vagina, such as from gonorrhœa or cancer of the cervix. 2. If any operation is to be performed where the hand or instruments have to be introduced into the uterus.

A 1 per cent. lysol solution makes the best douche.

Post partum douching is not necessary in ordinary cases, and should not be done as a routine. Under certain conditions it is necessary, and should be done with care by the medical attendant himself or herself, and not by the nurse. If there is any chance of septic material having been introduced, an antiseptic douche should be given, but if your case has been conducted aseptically from the beginning and there was no vaginal discharge beforehand the best douche to use is is one of sterilised water. The best position for the patient to be in is the lithotomy one, with her hips at the edge of the bed. The glass nozzle should first be boiled or steeped in boiling water. The first part of the douche is allowed to run over the vulva to thoroughly cleanse it, and then the vagina is douched before the nozzle is passed on into the uterus. The form of nozzle I have adopted can be passed into the uterus without introducing the finger to guide it into the cervix. A large quantity of fluid should be used, a gallon at least. If you are using perchloride of mercury the douche should be ended with boiled water to wash out the surplus albuminate of mercury which has deposited on the tissues. I have never seen a case of mercurial poisoning yet, although I have used one in 2,000 sublimate douches. Of late I have seldom used corrosive sublimate, as I have adopted lysol for use during the confinement.

Under the following conditions I believe one should douche immediately after labor:

1. In *post partum* hæmorrhage; then it should be given very hot (120 F.) 2. If there has been any purulent discharge previous to labor. 3. If the fœtus has been putrid. 4. If the hands or instruments have been introduced into the uterus. 5. If the parts have been lacerated to any extent, and if the labor has been a very prolonged one.

During the puerperium it is quite unnecessary, unless the lochia become putrid, or when the temperature rises and there is evidently something in the uterus although the lochia remain sweet. The immediate result of an intra-uterine douche during the puerperium is almost always to send the temperature up a degree or two, and in many cases the patient has a slight rigor. This is of no consequence as the temperature falls again in a few hours.

The Stages and Forms of Syphilis.

Adami (Canadian Practitioner, vol. 24, no, 8) discussed this subject and draws the following conclusions:

1. In the first place, that the lesions occurring in the congenital and acquired disease are identical, and brought about by the same process or processes. 2. That, whether we have to deal with the disease in the secondary or in the tertiary stage, the same processes are at work. That, if we accept those cases as truly tertiary in which we have to deal merely with the fibroid remains of obsolete gummata, and again those cases in which there is perihepatitis (which perihepatitis appears to be a complication rather than the genuine and direct results of syphilis,) then we are bound to admit that the study of the liver alone would indicate that no sharp boundary line can be made out between secondary and tertiary tuberculosis.

Further: 1. That now-a-days, under proper treatment, syphilis, if not a self-limiting disease, it is at least a disease which can be healed, so that many of the lesions recognized as being tertiary syphilis are truly indications of the old healed syphilis, and not signs of progressive or latent disease. 2. If the disease has not completely died out, and remains latent, the resistance of the tissues of the organism is such that in the majority of cases, if it does not tend to light up again, there is so considerable a local reaction, that the infection, and consequently the spread of the process, tend to remain strictly localized, and the germs (which are probably of baciliary nature) do not become disseminated through the blood. Thus neither the blood nor the secretions contains the virus. 3, In a very small number of cases the reaction on the part of the tissues may be so lessened, and the virus retain or gain so high a virulence, that either it causes ulceration, or in other ways becomes disseminated and capable of causing infection even late in the tertiary stage.

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H—— Q——, New York City; female; American; age 17; a case of Dr. C——. First seen May 11, 1898. During four years, this case had resisted all treatment until coming under my care. I first had the patient's hair cut off, and opened each pustule with a surgical needle. Then the scalp was depurated with the bovinine-peroxide and Thiersch, and dressed with a wet dressing of twenty per cent. solution of menthol. This was removed in twenty-four hours, and the depuration with bovinine-peroxide and Thiersch was repeated. The mother of the girl was then ordered to apply pure bovinine, dropping it on freshly, every two hours, and to bring her to the hospital every day for renewed depuration of the scalp, The condition began to improve immediately, and by June 3, 1898, the disease was cured, the scalp having assumed a healthy pink color.

Surgical Convalescence with Report of Blood Count in Twenty Cases†

Several months ago I received a visit from an agent of the M. J. Breitenbach Company of New York, manufacturers of Gude's Pepto-Mangan, who stated that his firm was anxious for me to test their preparation on surgical cases and to publish the results. I agreed to do so, provided I be allowed to utilize the first twenty major cases on which I operated, and that his company supplied me with the drugs and paid the cost of the necessary blood-counts.

I append a report of twenty cases. Eleven of them were private patients at St. Luke's Hospital, and nine were clinic cases at the Virginia Hospital. The histories are taken from official records, augmented by the blood-counts made by Dr. M. D. Hoge, Jr., Professor of Pathology in the University College of Medicine.

When it is remembered that the patients were all confined to bed; that they were recovering from the effects of serious surgical operations; and that they were subjected to the depressing influence of hospital life, the average increase of red blood corpuscles is remarkable. Had the cases been selected, and only anæmic patients tested, the results would have been even showier.

Case I.— Miss E. G., aged 20; patient St. Luke's Hospital. Struck on back by windlass of well four months prior to admission. Laminectomy and removal of carious bone and clotted blood. Gave Gude's Pepto-Mangan 60 days. First count, 1,500,000 red corpuscles to the cubic millimetre. Second count, 3,300,000 to the millimetre. Rapidly improving, and recovery assured.

Case II.—Mrs. M. K., aged 29; patient St. Luke's Hospital. Cystic disease of ovaries and chronic inflammation of appendix. Double Beattie-Tait, and appendectomy. Gave Gude's Pepto-Mangan 20 days. First connt, 3,930,000 red corpuscles to the cubic millimetre. Second count, 4,000,000 to the cubic millimetre. Discharged well.

Case III.—Miss C. H., aged 22; prtient St. Luke's Hospital. History of frequent attacks of hepatic colic—no jaundice. Opened the gall-bladder and removed a calculus one inch in diameter. Gave Gude's Pepto-Mangan 28 days. First count, 3,940,000 red corpuscles to the cubic millimetre. Second count, 3,900,000 to the cubic millimetre. Bile still escaping from fistula, but patient otherwise well.

Case IV.—Miss A. N., aged 32; patient St. Luke's Hospital. History of sudden peritonitis accompanied by profound sepsis. Exploratory incision revealed a pedunculated fibroid tumor of uterus, gangrenous from twisted pedicle. Myomectomy. Gave Gude's Pepto-Mangan 36 days. First count, 3,800,000 red corpuscles to cubic millimetre. Second count, 4,000,000 to the cubic millimetre. Good recovery.

Case V.— Miss E. J., aged 17. Patient St. Luke's Hospital. Spinal irritation from a fall. Anæmic, emaciated, and confined to bed for more than a year from contraction of ham-string muscles. Electricity, massage, and passive movements. Gave Gude's Pepto-Mangan 40 days. First count, 3,650,000 red corpuscles to the cubic millimetre. Second count, 4,425,000 to the cubic millimetre. Her menses, which had been suppressed, became regular. She fattened 20 pounds, and left the hospital walking with a cane.

Case VI.—Miss B. T., aged 21. Patient St. Luke's Hospital. Retroverted uterus, bound down by adhesions. Opened abdomen, freed organ, and stitched it to anterior abdominal wall. Gave Gude's Pepto-Mangan 30 days. First count, 3,900,000 red corpuscles to the cubic millimetre. Second count, 3,950,000 to the cubic millimetre. Complete relief from symptoms.

Case VII.—Master D. S. J., aged 9. Patient St. Luke's Hospital. Acute suppurative osteomyelitis of femur, tibia, and tarsus on one side and of tibia and tarsus on the other. Amputated one limb and used chisel and curette on the other. Gave Gude's Pepto-Mangan 45 days. First count, 3,720,-

†Dr. Stuart McGuire in Virginia Medical Monthly.

000 red corpuscles to the cubic millimetre. Second couns, 4,600,000 to the cubic millimetre. Patient discharged with well-healed stump, but incision in ankle still draining.

Case VIII.—Mrs. A. E. W. aged 48. Patient St. Luke's Hospital. Carcinoma of cervix; vaginal hysterectomy by clamp method. Had a bad liver and an irritable stomach, and though Pepto-Mangan was tried in varying doses and at different times during convalescence, she was never able to take it for more than a day or two consecutively. First count, 3,400,000 red corpuscles to the cubic millimetre. Second count not made. Case made a slow recovery, but is now well.

Case IX.—Master R. G., aged 14. Patient St. Luke's Hospital. Compound depressed fracture of skull from a three pound mass of type metal falling five stories. Trephined and removed blood clots and spiculæ of bone. Gave Gude's Pepto-Mangan 21 days. First count, 3,900.000 red corpuscles to the cubic millimetre. Second count, 3,800,000 to the cubic millimetre. The loss was less than anticipated, as the boy was injured while in vigorous health. Recovery rapid and complete.

Case X.—Miss A. E. S. aged 27. Patient St. Luke's Hospital. Indigestion, constipation, and dysmenorrhœa. Rapid dilatation of cervix. Gave Gude's Pepto-Mangan 34 days. First count, 3,900,000 red blood corpuscles to the cubic millimetre. Second count, 4,400,000 to the cubic millimetre. Bowels became regular, menstruation painless, and strength and weight increased.

Case XI.—Mrs. W. A. M., aged 28. Patient St. Luke's Hospital. Symptoms of long-existing ovarian and uterine trouble, to which had reeently been added those of inflammation of the appendix. On section, the uterus was found retroverted, the ovaries cystic, the appendix impacted and adherent, and the intestines filled with lumbricoids. The uterus was righted and stitched to the anterior abdominal wall, the ovaries and appendix removed, and latter a brisk purgative expelled the worms. Gave Gude's Pepto-Mangan 18 days. First count, 4,200,000 red corpuscles to the cubic millimetre. Second count, 4,310,000 to the cubic millimetre. Recovery and complete relief from symptoms.

Case XII.—Mrs. L. A. W., aged 44. Patient Virginia Hospital. Carcinoma of breast, with extensive lymphatic involvement. Radical extirpation of disease. Gave Gude's Pepto-Mangan 10 days. First count, 4,550,000 red corpuscles to the cubic millimetre. Second count, 4,620,000 to the cubic millimetre. Case discharged in two weeks and not heard from since.

Case XIII.—Mrs L. J., aged 25. Patient Virginia Hospital. Pyosalpinx following puerperal septicæmia. Opened abdomen, freed numerous intestinal adhesions, enucleated pus tubes, and removed uterus by Baer's method. Gave Gude's Pepto-Mangan 28 days. First count, 3,410,000 red corpuscles to the cubic millimetre. Second count, 4,100,000 to the cubic millimetre. Perfect recovery.

Case XIV.—Master J. F. S., aged 11. Patient Virginia Hospital. Tuberculosis of knee and femur, with secondary infection and profuse suppuration. Amputation. Gave Gude's Pepto-Mangan 24 days. First Count, 4,005,000 red corpuscles to the cubic millimetre. Second count, 4,300,000 to the cubic millimetre. Rapid recovery and marked constitutional improvement.

Case XV.—Miss A. H., aged 25. Patient Virginia Hospital. Diseased ovaries and retroverted uterus. Double ovariotomy and ventro-suspension of uterus. Gave Gude's Pepto-Mangan 30 days. First count, 4,300,000 red corpuscles to the cubic millimetre. Second count, 4,200,000 to the cubic millimetre Patient a hypochondriac and still complains.

Case XVI.—Mrs. E. B., aged 34. Patient Virginia Hospital. Cirsoid aneurism of scalp and forehead causing agonizing pain from involvement of orbit. Ligation of right common carotid artery. Gave Gude's Pepto-Mangan 16 days. First count, 4,400,000 red corpuscles to the cubic millimetre. Second count, 4,100,000 to the cubic millimetre. Force of pulsation diminished and pain completely relieved.

Case XVII.—Mr. P. S., aged 21. Patient Virginia Hospital. Suppurative osteomyelitis of tibia. Amputation of limb. Gave Gude's Pepto-Mangan 28 days. First count, 3,400,000 red corpuscles to the cubic millimetre. Second count, 3,700,000 to the cubic millimetre. Recovery with marked improvement in general health.

Case XVIII.—Miss N. C., aged 30. Patient Virginia Hospital. Rapidly growing fibroid tumor of uterus. Complete hysterectomy and removal of mass weighing forty pounds. Gave Gude's Pepto-Mangan 30 days. First count, 3,700,000 red corpuscles to the cubic millimetre. Second count, 3,750,000 to the cubic millimetre. Intercurrent attack of pneumonia, which retarded recovery and interfered with the regular administration of medicine.

Case XIX.—Mrs. S. S., aged 50. Patient Virginia Hospital. Carcinoma of breast. Amputated organ and dissected out adjacent lymphatic glands. Gave

Gude's Pepto-Mangan 10 days. First count, 4,200,000 red corpuscles to the cubic millimetre. Second count, 4,250,000 to the cubic millimetre. No report from case since discharged.

Case XX. -Mrs. S. J., aged 31. Patient Virginia Hospital. History of three acute attacks of appendicitis. Thin, anæmic, and nervous. Appendectomy. Gave Gude's Pepto-Mangan 26 days. First count, 2,644,000 red corpuscles to the cubic millimetre. Second count, 3,950,000 to the cubic millimetre. Gained 15 or 20 pounds in weight and is completely well.

The Eradication of the Gonococcus.

In an instructive article on the treatment of acute urethritis in the male, published in the Philadelphia Medical Journal of August 13th, Dr. James Pedersen, Instructor in Genito- Urinary Diseases in Post-Graduate Medical School and Hospital, states that in the treatment of this disease three indications are met. 1. The Eradication of the etiologic micro-organism. 2. The termination of the inflammatory process. 3. The repair of the damaged mucous membrane. To meet the first indication, Dr. Pedersen has lately made use of Protargol which he considers superior to argonin and nitrate of silver. Under the administration of a 1 per cent. solution of Protargol, instituted with the first sign of the discharge, he has seen the gonococci disappear from the pus in two days. For 48 hours the discharge increased then began to subside; on the sixth day there was only the morning drop. After the discharge has apparently ceased, however, it is advisable to continue the injections for a few days and then to gradually discontinue them tentatively until the gonococci cease reappearing.

With regard to the second indication, the author has observed that in the average case of gonorrhoeal urethritis in which protargol has been employed in the manner indicated, a hand injection of a solution of any one or two of the astringents, mineral or vegetable, usually suffices, The injection recommended consists of zinc chlorid, each ¼ gr. to 1 fluid-ounce of distilled water. According to the degree of inflammation present the injection is used either cold or hot.

With reference to the third indication, according to the author's experience, nitrate of silver in solution is by far the best agent in all forms and degrees of urethritis. It is his custom to employ it either by means of the Ultzmann syringe, or better still by the Bangs syrine-sound, or by means of cotton swabs through the endoscope. While these have proved the best means for meeting the three indications mentioned, the author also recommends that we must not lose sight of the patient's general condition.

In acute posterior urethritis the remedial agents chiefly relied upon are silver nitrate (by iustillation, application or irrigation) and solutions of potassium permanganate by irrigation, the former drug being preferred by the author.

Antitubercle Serum in Tuberculosis.

By Landon B. Edwards, M. D., Professor of Practice of Medicine, University College of Medicine, Richmond. Va.

Medical Record, April 9th, 1898.

In the cases submitted no auxiliary treatment has been neglected (especially emphasizing the value of beechwood creosote by almost continuous inhalation and internal administation), but serum has proven to be an invaluable help. My record stands in round figures as follows: Total number of cases of tuberculosis of the lungs treated with antitubercle serum (Paquin) since January 1, 1896, thirty-five. Total deaths five. Each of these cases came into my hands in a practically hopeless condition, apparent to the most casual observer. Total recoveries, eleven. By this I mean that bacilli have disappeared from sputa; healthy respiratory murmur has been restored; chest expansion increased from about one inch to two and one-half inches or more; flesh increased to about normal, according to height; appetite for meats restored, not despising pieces of fat, etc. The patients look well, and, according to physical signs and symptoms, are well. Two other patients, who came under my care after grounds for hope were gone, will die shortly. As results in two other cases, well advanced in consumption, I am doubtful—to day apparently improving; tomorrow worse, fluctuating in condition. Three or four other patients are holding their own, inclining to improvement, thus encouraging hope. The other patients are improving, and some, I believe, will recover.

In this estimate I have referred to some patients who are not now under personal observation, living at distant points, but from most of whom I hear occasionally. They are under the care of their home physicians, who I believe, follow out the general line of treatment advised.

This record is greatly better than I ever had by any other agents than serum. I have used no other serum than Paquin's, being pleased with results, except in several instances of apnœic attacks alarming the patient, nurse, and doctor, but without any fatality. The rectal method would probably avoid this unpleasant feature in sensitive patients.

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There are certain well known disadvantages connected with the use of salicylic acid and salicylates which have led some physicians to discard them in the treatment of acute rheumatism. Aside from the gastric disturbances to which they frequently give rise, such as nausea, vomiting, they have been known to exhibit a marked weakening effect upon the heart. And in view of the fact that the heart is frequently attack by the rheumatic virus, this objectionable action of the salicylates is rendered the more impressive. Fortunately the physician has in SALOPHEN a remedy which is entirely free from injurious, or unpleasant effects. During its administration no gastric disturbances, nervous phenomena, or cardiac weakness have ever been observed in the thousands of cases in which it has been employed. Clinical experience proves that it is in every respect as efficient as salicylic acid in rheumatic affections, and that it can be safely administered where other antirheumatics fail or give rise to injurious effects.

Nasal Catarrh.

Dr. T. Pickles, Anna, Ill., writes to the editor of The Medical Summary the following therapeutic results from actual experience:

For sore nose, nasal cattarrh, etc., I have used Unguentine for the past three years, and have yet to see the case, where I have used it, that was not cured within a reasonable length of time.

In cases where dry scabs or scales form in the nose, I order to give, say a half ounce of Unguentine, make a small mop with a small roll of absorbent cotton on the end of a small stick, roll the mop in the Unguentine and apply well up both nostrils, at the same time have patient to snuff the nose until the Unguentine can be plainly tasted. Use only once a day, just before retiring for the night. This generally cures within three weeks.

Instructive Exhibits.

"One of the chief attractions at the annual gatherings of The American Medical Association is always the exhibition hall, where the principal drug, instrument and food products of the world, the results of years of experimental research and labor, are placed in view."

"Among the many attractive exhibits at this year's Denver meeting, that of IMPERIAL GRANUM, recognized by many leading physicians as the standard among prepared foods, occupied a prominent space and the representative in charge was kept busy explaining to the visiting physicians the superiority of this preparation. Handsome sample boxes of the FOOD, and copies of The Imperial Granum Co.'s valuable clinical record, were presented to each physician in attendance."—From The Journal of the American Medical Association, Chicago.

An All-Round Uterine Tonic.

I have found Dioviburnia, prepared by the Dios Chemical Co. of St. Louis, to meet the most exacting requirements of a general all-round uterine tonic, and know of no other preparation on the market to fill all the requirements so well. I have used it in a case of chronic uterine trouble following a miscarriage in which the patient, a multipara past forty years of age, had been a sufferer with uterine trouble for over fifteen years. Countless other remedies had been tried until the patient almost despaired of recovery was about to go under an operation when Dioviburnia was tried, acting almost like magic. I have found it equally satisfactory in several other cases of chronic uterine trouble and find it where given a fair trial an invaluable assistant.

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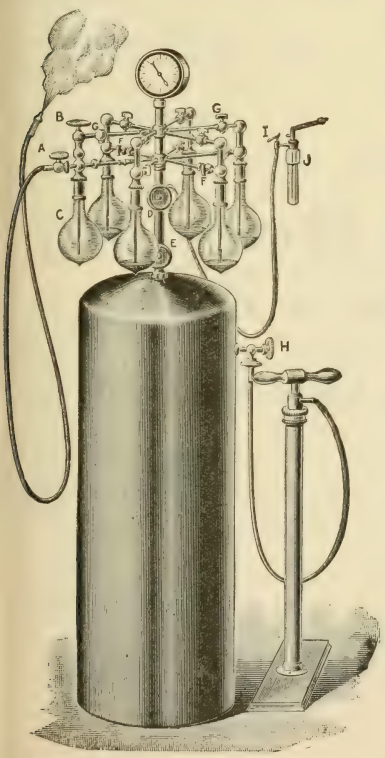

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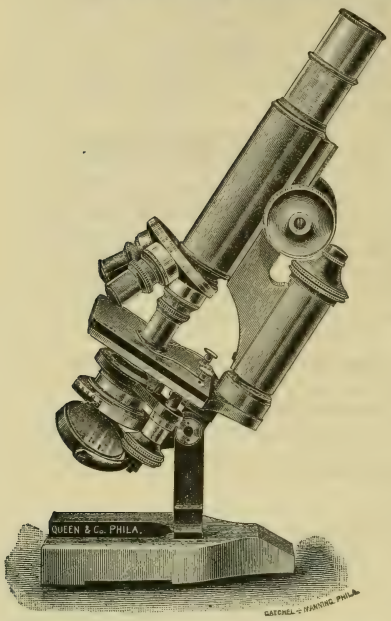

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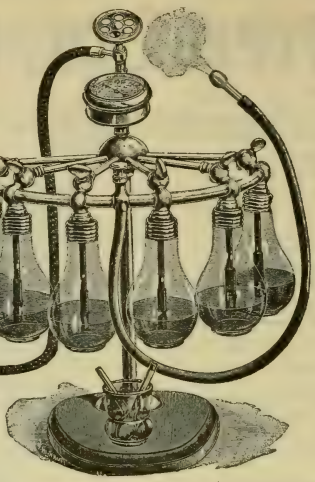

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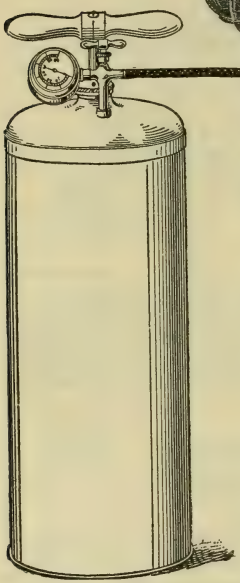

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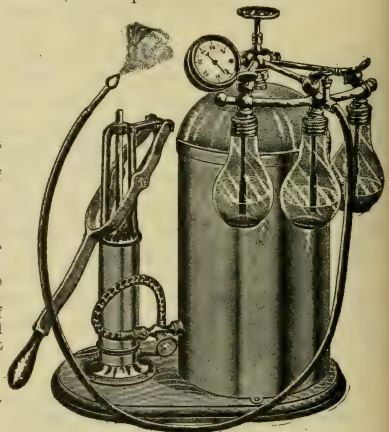

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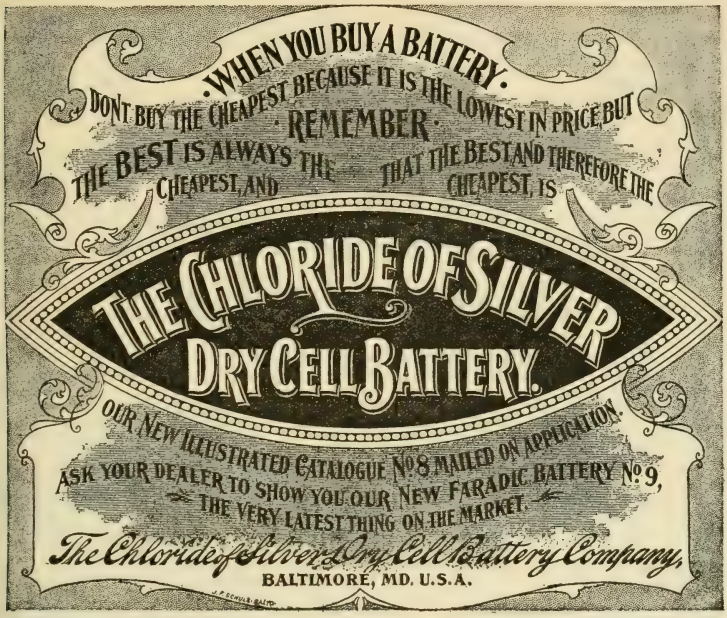
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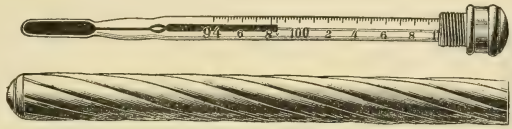

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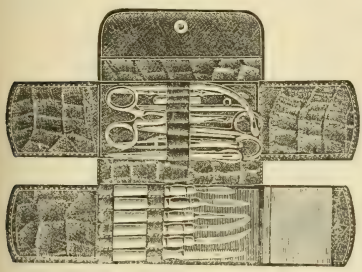

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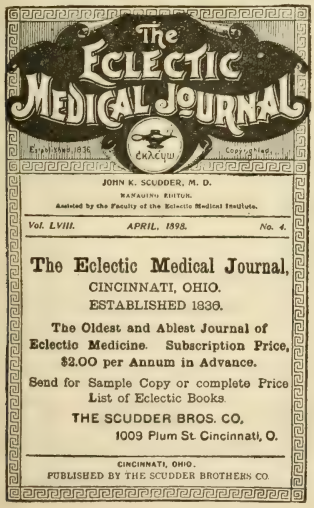
The
ECLECTIC
MEDICAL JOURNAL
Established 1836
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JOHN K. SCUDDER, M. D.
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Vol. LVIII. APRIL. 1898. No. 4.
The Eclectic Medical Journal,
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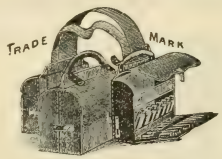

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S. A. L. R. R. Schedule in Effect August 16, 1898.

SOUTHBOUND.

		No. 403.	No. 41.
Lv. Charlotte,	S. A. L.	*7 50am	*10 25pm
Ar. Clinton.	"	*9 45am	*12 14am
Ar. Abbeville,	"	11 03am	1 35am
Ar. Athens,	"	1 13pm	3 43am
Ar. Atlanta,	(Central time)	2 50pm	5 20am

NORTHBOUND.

		No. 492.	No. 38.
Lv. Charlotte,	S. A. L.	10 25am	*7 50am
Lv. Monroe,	"	*9 40pm	*6 05am
Lv. Hamlet,	"	*11 15pm	8 00am
Ar. Wilmington,	"	.....	*12 05pm
Lv. Raleigh,	"	*2 16am	*11 25am
Ar. Henderson,	"	3 28am	*12 57pm
Ar. Weldon,	"	*4 55am	*2 45pm
Ar. Richmond,	A. C. L.	8 20am	7 34pm
Ar. Washington.	Penn. R.R.	12 31pm	1 30pm
Ar. Baltimore,	"	1 46pm	10 08am
Ar. Philadelphia,	"	3 50pm	3 50am
Ar. New York,	"	*6 23pm	*6 53am
Ar. Portsmouth,	S. A. L.	7 25am	5 20pm
Ar. Norfolk,	"	*7 35am	*5 35pm

WESTWARD.

	No. 41.	No. 403.
Lv. Charlotte	10 25pm	7 50am
Ar. Mt. Holly		9 45am
Ar. Lincolnton		10 35am
Ar. Shelby		11 37am
Ar. Ellenboro		12 15pm
Ar. Rutherfordton		12 50pm

†8 40am	Lv.	Hamlet.	Ar. 6 20pm
10 00am	Ar.	Cheraw	Lv. †5 00pm

EASTWARD.

	No. 38.	No. 402.
Lv. Charlotte	*5 10am	8 28pm
Ar. Monroe	5 55am	9 10pm
Lv. Monroe	6 05am	9 40pm
Lv. Marshville	6 25am	.....
Lv. Wadesboro	7 01am	10 31pm
Lv. Rockingham	7 41am	11 05pm
Ar. Hamlet	7 55am	11 23pm
Lv. Hamlet	8 20am	.....
Lv. Laurinburg	8 46am	.....
Lv, Maxton	9 05am	.....
Lv. Lumberton	9 53am	.....
Ar. Wilmington	12 05pm	.....

* Daily. † Daily Ex. Sunday.

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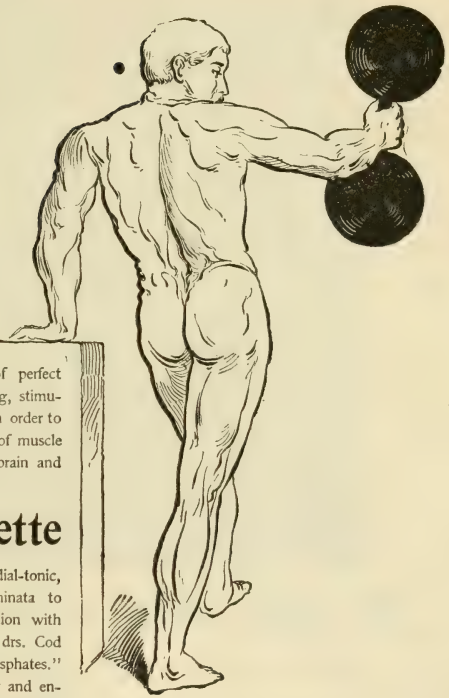

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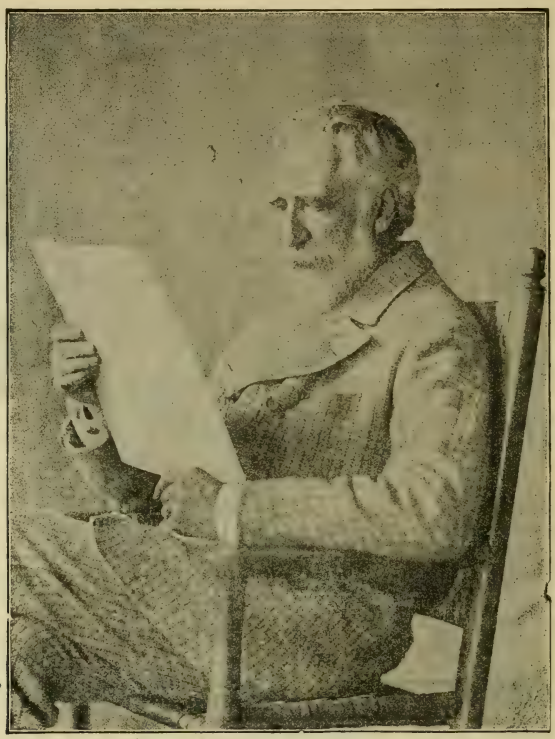

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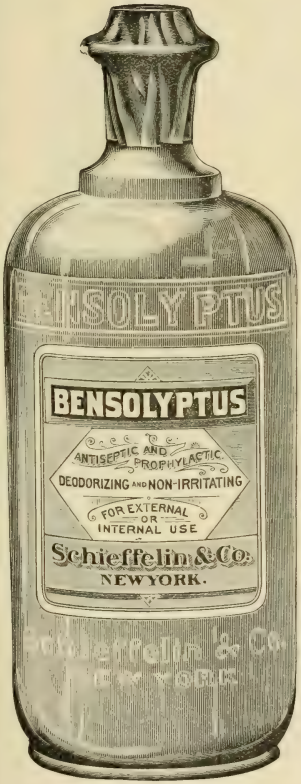
Alkaline Antiseptic and Prophylactic.



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Catarrhal Affections

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The most efficient destroyer of the disease-producing micro-organisms.
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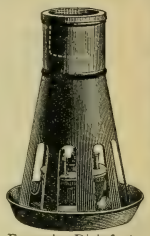
Does not injure furniture, fabrics, or material of any kind.
When the vapors of Formalin are employed in the treatment of zymotic diseases, or for ordinary air purification and sterilization, one pastil should be constantly evaporated in the upper cup of the lamp. When rapid vaporization is required the upper cup should be removed and the pastils placed directly in the lower receptacle.



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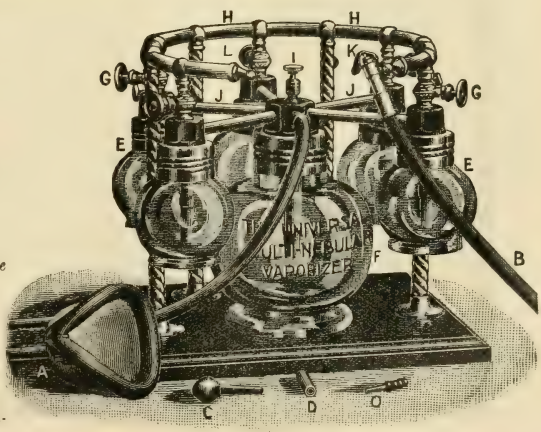

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That Blood is such a power as here described, is an undisputed physiological fact. Its transmission from one animated organism to another, for the purpose of supplying a defect in the latter, is the substance of the Blood Treatment; and How to Do this, in different cases, is the form or description of the same. Blood may be taken from a healthy bullock (arterial blood—elaborated with due scientific skill); or it may be obtained in the well-attested living conserve known as bovinine, from any druggist; and may be introduced into the veins of the patient in either of four ways, that may be most suitable to the case: viz.: by the mouth and stomach; by injection, with one-third salt water, high up in the rectum; by hypodermical injection; or by topical application to any accessible lesion.

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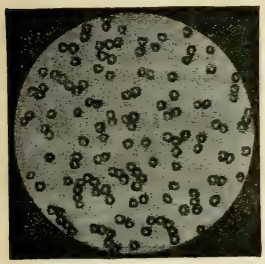

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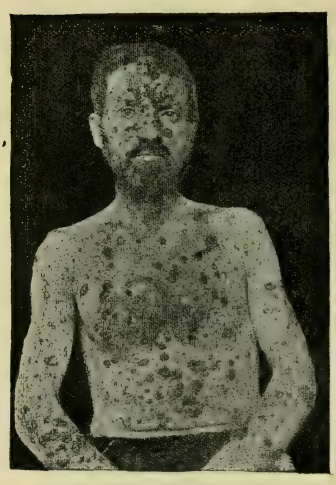

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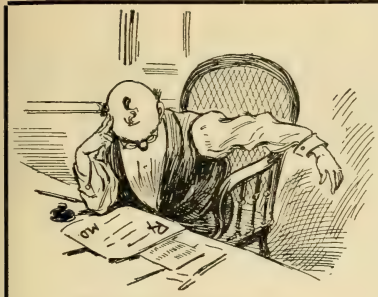

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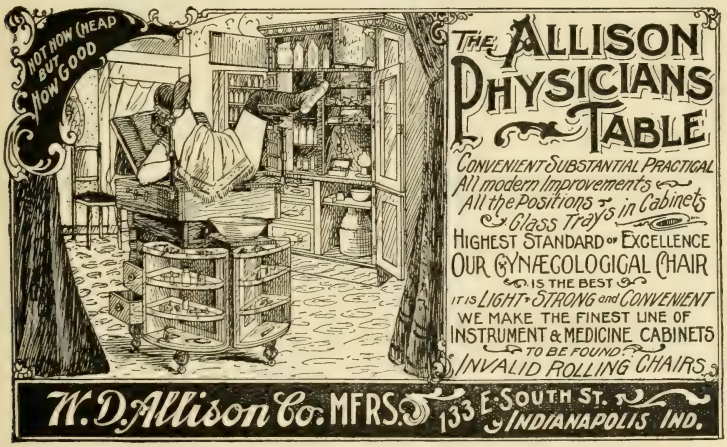
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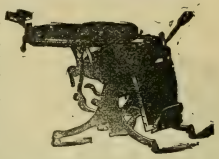

Fig. XVII—Dorsal Position.

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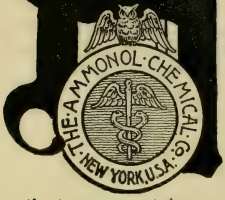

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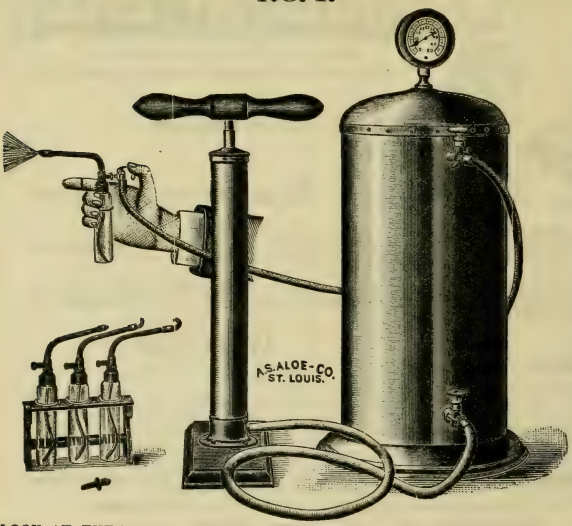

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The Charlotte Medical Journal.

Vol. XIII. CHARLOTTE, N. C., NOVEMBER, 1898. No. 5.

Treatment of Diabetes Mellitus.

By James Tyson, M. D., Professor of Clinical Medicine in the University of Pennsylvania.

While it must be admitted that the glycæmia and consequent glycosuria, which are such conspicuous symptoms of diabetes mellitus, are symptom only of some imperfectly understood morbid state, it must also be conceded that the former is a symptom which is itself the cause of other symptoms. Such is the furuncle, the cataract and the neuritis which so often attend diabetes mellitus.

On the other hand, the glycæmia is also a symptom, the complete removal of which is, in most cases, a practical cure of the disease, whatever its origin. I say the complete removal, because I do not forget that in the severest forms of diabetes we may by dietetic regulations diminish decidedly the degree of glycosuria without improving otherwise the condition of the patient, while it is also true in these cases that by no resources in our power can we remove entirely the glucose from the blood and urine of the patient. This is because glucose in such cases is produced not only from the carbohydrates ingested, but also from albumin taken in as food, whence the carbohydrate radical is split off. In such cases a rigid adherence to a pure proteid diet is still attended with a glycosuria. Nay more, there is reason to believe that in the more advanced of these cases the *body* albumen also contribute to the glycæmia and glycosuria in the same manner, by the splitting off of its carbohydrate molecule from its albumen molecule. This is attested not merely by the growing emaciation and asthenia of the patient, though an abundance of proteid food is given, but also by the fact that such a diabetic keeps on excreting sugar during a period even of fasting. This has been conclusively shown by the experiments of Voit and Pettenkofer, by von Mehring and by Block.

Thus characterised, diabetes mellitus is for the most part of unknown etiology and morbid anatomy. A few cases may be due to brain lesions, of which a very small number are traumatic, and are as amenable to treatment as the trauma causing them, whether external or internal. In a rare instance a syphilitic tumor may be the offender when specific treatment is undoubtedly efficient, and even curative.

A good many cases, some allege half, are associated with pancreatic disease, probably causal, but whether so caused or not they are incurable because of the uncurable nature of pancreatic disease, which is commonly cancerous, calculous or cystic.

This leaves a large number of cases, at least one-half, which are without demonstrable causal lesions. To these the name *essential* diabetes may, for distinctive purposes, be applied, the others being classified as *symptomatic*. It matters not whether the former class of cases is caused by fatigue, nervous strain, shock, or what not, they remain without demonstrable cause which can be attacked with a view to cure. These include mild cases as well as severe, but the severe cases are *mostly* of this kind. In general it may be admitted that the quantity of the sugar in the urine is a measure of the severity of the disease.

The mild cases alluded to are undoubtedly relieved by diet, and clinical experience abundantly attests that so long as the sugar is out of the urine, or amounts to a small percentage, say less than 2 per cent., the individuals thus affected are practically well. Now to accomplish this, it is not necessary, in most cases, to adopt a rigid proteid diet. In some a moderately restricted diet, such as may be found laid down in any text-book, is quite sufficient to keep the glucose out. In others it easily keeps it down to the harmless percentage referred to, while a pure proteid diet will take it out altogether. Experience also abundantly attests that it is impossible to live upon a pure proteid diet for any length of time. The subject will ultimately starve to death. At the same time I find it a useful practice when possible, occasionally, say once a month, to take the glucose altogether out of the urine by a twenty-four or forty-eight hours' restriction to a proteid diet. It does the patient no harm and tells one easily where one stands and what one can do. It is my usual practice in such cases. For cases that are thus amenable to dietetic treatment I use no other measures, except hygiene and exercise, including massage, or such drugs as may be called for by symptoms as they arise.

Suppose, notwithstanding such a diet,

the sugar remained in the urine in quantity sufficient to reach the danger line. An increased stringency may be directed. Bread may now be altogether dispensed with, as a rule, while a gluten bread may be substituted. Unfortunately a nearly pure gluten bread is difficult to obtain in this country, while such a bread soon tires the patient. The same is true of other substitutes for bread, such as pure bran-bread, soya bread, almond bread and aleuronaut bread. Occasionally a patient will be found in whom the absence of bread from the dietary is especially detrimental, causing him to complain of increased weakness, but this is not often. Should it occur some bread must be resumed, which is still a different thing from permitting bread without restriction.

Should the limit of treatment by diet and hygiene be obtained, can we do more by drugs? Yes, at times a good deal, at others little, at times nothing. I am sure as the result of repeated trials that arsenic is sometimes of service in reducing the sugar, and I have already said that while glycosuria is a symptom, it is a symptom the removal of which is associated in many cases with amelioration of other symptoms. It is like the temperature of typhoid fever. What reduces it ameliorates the condition of the patient, although it may not be the high temperature which is responsible for the results of the disease. Fowler's solution is probably the best preparation of arsenic. I do not usually run the dose up very high, rarely above five minims three times a day. It does not always help, and it is perhaps only the mild cases in which it is of service.

Arsenic failing of its purpose I next use codeine, not because it is second in efficiency, for it is much more efficient than arsenic, but unfortunately it is not so harmless. Codeine is, however, less harmful than the other alkaloids of opium, or opium itself. I usually begin with one-fourth grain after each meal, adding a quarter of a grain a day, first at bed time, until the desired effect is produced, or it fails of its purpose. Codeine is the more satisfactory the less it causes constipation. Whenever this effect is produced its efficiency is impaired. Indeed cases of diabetes, associated with constipation, are always less amenable to treatment.

Next to treatment by these measures I deem it most important to administer alkalies, if possible, by the use of the alkaline waters, of which the foreign Vichy and Vals are the best. Not less than a quart of these waters should be drunk daily, between meals. How alkalies act, precisely, I do not know. It is probable that they facilitate the burning up the sugar while they also serve to neutralise the acid products represented by diacetic and oxybutyric acid arising in the blood. Hence it is well to keep the blood well charged with alkali.

Apart from the drugs mentioned, these agents have little effect in controlling diabetes mellitus. The salicylates are undoubtedly efficient in a few mild cases where there is an association or alternation with gout. Other coal tar derivatives, antipyrine and antifebrin, may also have some effect in mild cases, but I no longer use them. They are inferior to arsenic and the salicylates in such cases, and in severe cases they are useless. The nitrate of uranium was brought forward twenty years ago as a remedy, and I thought I had demonstrated its uselessness then to my ample satisfaction. In the autumn of 1896, however, Dr. Samuel West, of London, published a paper in the British Medical Journal, September 19th, in which he highly praised this drug in the treatment of diabetes mellitus, beginning with a grain twice a day, and gradually increasing to five grains and even ten grains, three times a day. These were much larger doses than I had ever given, and I again used it in three well marked cases, attaining the doses named by Dr. West, though I found it quite irritating and sometimes causing looseness of the bowels. I was unable to discover any good effect from it.

At the meeting of the British Medical Association, held in Montreal in 1897, Dr. E. Duncan read a paper in which he reported the results of treatment by this drug which were satisfactory. Since then I have made a further trial and though it was not altogether without effect, the latter was so trifling, and of such short duration, that I have again ceased to use it. Benzosol, which has received some praise, I have tried fairly and find it totally and absolutely without effect. It is evident, therefore, that our treatment of this disease, by drugs, is limited.

A word as to the treatment of the cases which do not yield to the dietetic plan as recommended. Shall we insist upon a rigid proteid diet with the hope that it may reduce the sugar and relieve the symptoms? No, not beyond the tentative and temporary manner already recommended. Undoubtedly by such rigidity we can reduce the sugar, but unfortunately this reduction is not always associated with improvement of other symptoms, and it is at least not impossible that a prolonged course of such treatment would influence unfavorably the course of the disease.

A word as to diabetic coma, its immediate causes, and treatment. The conclusion of modern research is that it is not aceton but diacetic acid, or oxybutyric acid or both, which is responsible for these symptoms. An important question bearing upon therapeutics is as to the source of these substances. It is commonly conceded that the body albumin is for the most part responsible, the products named arising from the splitting up of this substance. The question has been raised as to whether a proteid diet does not also increase acetone and dietetic acid. The following observations go to support this view:

Rossbach showed in 1887 that acetonuric and diaceturia present in decided quantity in the urine of a diabetic when on an exclusive meat diet, disappeared from the urine of the same patient on adding carbohydrates to his food, though the sugar excretion also arose somewhat. Again, Hugounenq, about the same time, found the production and excretion of oxybutyric acid greatly favored, if not actually produced, by an exclusive meat diet. A similar observation was made by Leva in 1891. Finally, most recently in a series of excellent papers, by Dr. Edward L. Munson, of the U. S. Army, based on the close study of a case of diabetes,* this position is defended.

I am satisfied, however, from my own clinical experience that while proteid food may be a source of diacetic acid it is not the sole or even chief source, and that it is not sufficient to justify a modification of the previously acknowledged dietetic methods, *per se*. On the other hand, I would not lay down any exclusive rule of treatment, but should be governed in each case by the individual peculiarities of that case. Should observation show that a case is not doing well on a rigid diet it must be altered. If, however, the patient is doing well under the diet restricted, yet never so restricted as to exclude all carbohydrates except for a short time, I would continue the treatment, aiding it by such drugs as may be necessary.

As to the treatment of diabetic coma. A well established case of diabetic coma is rarely restored, but threatened coma apparently is sometimes arrested. The same treatment is indicated for both objects. My procedure is first to place the patient on a diet of milk and Vichy only, equal parts of each. The French imported Vichy should be obtained if possible. If this cannot be secured, the artificial Vichy may be used. Hypodermoclysis, with the so-called normal salt solution, six-tenths of 1 per cent., is of undoubted advantage. In common with others I have seen cases of actual coma revived in a remarkable degree, but the improvement has only been temporary. Stimulation by ammonia and the further use of alkalies by the mouth, as the citrate of potassium in 20 grain doses, every two hours, are further useful. Inhalations of oxygen have lately been recommended and should also be tried.

*Journal of the American Medical Association, April 24 to May 22, 1897.

Scarlatina.

By A. A. Young, M. D., Newark, N. Y.

Scarlatina cannot be regarded in any other light than that it is a communicable disease conveyed from person to person, though the "how of which" is yet to be determined.

That the disease is produced by the development of a previously existing bacillus seems rational, for by this method is life, as seen through material forms, reproduced; it is not conceivable that animated forms originate *de novo*.

Taking this as a self-evident fact it is easy to infer that all bacterial diseases, especially the contagious ones, are the resultants of the developing specific bacilliæ in the blood and that the occular manifestations such as the membrane of diphtheria, the eruptions of small-pox, scarlatina, &c., are but the niduses of the fully developed bacillæ.

The simple presence of the fully developed bacillæ does not constitute disease; they must first become active and start the processes of reproduction by depositing the germinal vessicles or spores from which the bacillæ are to be developed, in some suitable culture medium of the body, and it is during their process of growth that pathological conditions are produced that constitute disease.

If this theory be tenable then it is reasonable to direct our efforts toward the immunizing of our patients, or to render inert and worthless such substances as are required for the development or growth of specific bacillæ.

This has been accomplished in a few cases, the most notable of which is vaccination for the prevention of small-pox. That some diseases have been modified and shorn of their terrors by the immunizing treatment can no longer be questioned by observant and thinking men; this treatment then seems to be the rational one so far as it can be practically and intelligently carried out.

In scarlatina then first comes nausea and vomiting, chills followed by high fever

which mark the onset of the disease, the beginnings of bacilliæ development; sometimes, following this, comes the peculiar eruption of the skin which marks the time of completion and deposition of the fully developed bacillæ within these dermal patches, and there remaining inert until a suitable menstrum be found in which they can complete another biological cycle; their destruction in and elimination from their home is to prevent in a measure a re-infection.

Unfortunately, antiseptics administered internally are of but little service, for what will destroy the developing bacillæ by contact, is capable of destroying many elements on which human life depends.

The scarlatina bacillus yet remains to be demonstrated, but that such a bacillus exists seems to admit of no doubt. Under our present knowledge we must watch and wait for its positive demonstration, and be content with our empyrical and symptomatic treatment.

The condition of the digestive organs, as indicated by the appearance of the tongue, the deposit upon the tonsils, the high fever, the dry and itchy skin followed by the peculiar rash claim our attention in formulating a treatment, not the treatment, for this must be based upon a correct etiology and pathology. The specific germ must first be known, its methods of growth fully understood and a knowledge of the agent that will prove its destroyer must first be acquired before the disease can be successfully and intelligently treated.

The medicinal agents which seem to be indicated and which have served a good purpose, given cautiously, are the coal-tar derivative combined with pilocarpin, aconite and some of the simple bitter tonics.

This treatment might be termed the eliminative one, and of these agents pilocarpin may be regarded as par excellence; it will stimulate to action all of the excretory organs of the body with but little depressing influence as an after effect. With the administration of a single dose, say one-fourth grain, as a rule, there soon follows intense salivation and sweating with marked increase of excretion of urine, and as a result a rapid decline in temperature and a general feeling of relief. With the free use of this agent, which covers a period of over fourteen years, the writer has yet to observe the first instance where it exerted a deleterious influence over the heart's action. It seems, therefore, that the prevalent opinion that it is a powerful heart depressant is based upon theory instead of practical observation. It is a drug that promises much as an eliminating agent in infectious fevers; it does its work by the process of elimination either of the developing bacillæ, or of the substances on which they feed, it may be a starvation process.

So far as the coal-tar derivatives are concerned they are administered for only one purpose, viz.: to quiet cerebral disturbances over which in some unknown way they have a marked influence.

After the initial symptoms have subsided and temperature approaches the normal, farther restorative measures are largely left to nature, which she manipulates well if left unhampered by active medicinal agents.

A word now concerning the dietetic treatment, and a word covers almost the entire ground: at the onset the patient usually wants nothing, save water, which give in abundance. Why burden the system with food, causing more work which means more waste of vital forces, when to the patient food is actually repulsive?

The disease is self-limited, starvation cannot occur, though no food be taken during the entire run of this specific fever; follow out, therefore, the patient's wishes and desires, his nature knows best what he needs in this direction, knows best what is needed to supply the demand caused by scarlatinal wastefulness. It is not a case like the starvation of typhoid at convalescence where the patient desires everything and anything and human judgment must then interfere. The normal craving of the system is all we meet with, which is an index of what the supply should be.

The present treatment then would seem to be one that would reduce the abnormal conditions to a minimum after which following out the expectant plan—expect the patient to recover.

The final act, the period of desquamation, requires the most careful attention, for the propagation of the disease is dependent largely, if not entirely, upon the spores existing in the exfoliated dermal patches. Thanks to the smoked ham-rind of our fathers, they builded better than they knew. The modern therapeutic agents, carbolized oil and vaseline, are not the peers of their predecessor, the former having the more "penetrating" power, while the latter succeed better in hermetically sealing and preserving the vitality of the spores within their nidus—the scale.

Why use oils at all? There is a far better method theoretically and one, the practice of which, indicates the theory to be a fact. In formaldehyde we seem to have the ideal germicide; this agent possesses hardening, penetrative and germicidal properties found in no other drug, which make it especially valuable for sterilizing the epi

thelial scales, which doubtless contain the germinal spores. It matters but little then whither they may drift, for, from them similar life cannot spring without a new infection, and it is probable that the scales are so altered by the action of this agent upou them that they may never again become germ propagators.

Formaldehyde approaches the ideal germicide and as such its use, during the desquamative stage of scarlatina, is markedly indicated, and its use commended.

22 East Miller St.

Nauseating Expectorants Useless and Often Injurious to the Patient as Usually Administered.

By Robert Reyburn, A. M., M. D., Professor of Physiology and Hygiene, Medical Department, Howard University, Washington, D. C.

The writer has a medical friend (now in Japan) who had a favorite expression he made use of when wishing to strongly emphasize his opinion of the uselessness of any course of procedure.

He would say "that it was about as effectual as the use of castor oil upon a graven image."

Strong as the above expression may appear to be, it exactly harmonizes with what the writer believes to be the effect of nauseating expectorants such as squills, ipecac, &c., when given as they often are in continued doses, in cough mixtures, for bronchial affections.

Take for instance these cough mixtures so often given to children, which usually contain solutions of citrate of potash and acetate or citrate of ammonia. With these is often given muriate or carbonate of ammonia and syrup of squills or ipecac and often opiates.

Let us consider for a moment what the therapeutic action of such a mixture must be when taken into the human stomach. Squills and ipecac popularly enjoy the reputation of loosening a cough. The only possible way in which they can do so is by keeping up more or less pronounced nausea, This nausea will of course diminish the severity of the paroxysms of coughing, but it does so at the expense of the digestive organs.

Every one knows that the induction of nausea retards very greatly, if it does not entirely stop, for the time being, digestion. We believe, therefore, that the use in continued doses of these nauseating expectorants should be entirely discontinued. The question may be asked have nauseating expectorants no therapeutic value? We would answer that they should only be used in the manner about which we will now speak. We would recommend strongly the use of full single doses of these agents as emetics in the bronchial catarrh of children, for the purpose of freeing the bronchial tubes from the tough tenacious mucous which fills them and impedes respiration. But let us proceed to analyze our prescription a little farther. The muriate or carbonate of ammonia are undoubtedly useful by thinning and liquifying the tough bronchial secretions; but is it not a very clumsy way of giving it in a mixture, to be swallowed and thence pass by the digestive system through a round about way to the lungs.

Can we not, therefore, apply our medicaments directly to the lungs without the intervention of the stomach and digestive system? We answer, this can be done easily and certainly by giving our medicaments in the shape of spray or atomized vapors. These can be given to the youngest child without injury and produce rapidly their therapeutic effect.

If, for instance, we wish to give carbonate or muriate of ammonia to a child it will be very easy to make a simple solution in water (with the addition of glycerin to diminish the pungency of these salts) and spray it in the mouth and throat of the child by means of the hand atomizer which can now be found in almost every house.

If this is done gently and with a little tact, the child soon becomes accustomed to it, and it will be found not to inspire any thing like the disgust, that attends the administration of the usual expectorant mixtures.

Oily medicaments required in cases of bronchial catarrh, croup, &c., can also be given easily in the form of spray. Balsam copaiba, for instance, when dissolved in alboline or liquid vaseline can be sprayed in the child's throat with very little discomfort or objection on the part of the child. Any one who has experienced the difficulty and sometimes impossibility in wilful children, of the administration of such drugs by the mouth will gladly hail the spray method as a decided advance.

Of course it will be readily understood that small doses of opiates or any other drugs can also be administered, and medication in this way can be varied to suit the requirements of each case.

The use of opiates, however, in the bronchial catarrh and bronchitis of young children is a double edged sword, and they should be used with very great caution;

while they are potent for good in careful hands, yet they are still more potent for harm.

In regard to the use of the coal tar compounds (phenacetin, acetanilid, &c.) in these above mentioned diseases in young children, we are strongly inclined to abjure entirely their use.

One of our most popular text-books on the diseases of children, Starr's Text-Book on Diseases of Children, in the article on bronchitis, recommends phenacetin in one grain doses to be given every four hours to infants of six months old, and in doses of two grains to children of two years of age. We believe such doses to be very dangerous, and have a vivid recollection of two young children who just escaped death as the result of the administration of phenacetin in the doses above mentioned.

Finally, we recommend in all cases of diseases of the bronchial mucous membrane, to give the medicine as far as possible by the bronchial mucous membrane, and not by the digestive organs.

Hired Expert Medical Testimony,*

By M. H. Fletcher, M. D., Asheville, N. C,

Those of us who love medicine and are jealous of the rights and standing of our profession, are often humiliated by the way in which some of our foremost men—college professors and would be leaders in medicine—are held up to ridicule before our courts and in the newspapers.

What member of our society, who read the newspaper accounts of the cross examination of the doctors in the Leutgert trial, did not blush for shame at the way in which the evidence was made to appear? And this is not an isolated case. They are of almost daily occurrence. No wonder we so often run across this expression of the lawyers: "If we can get the doctors to fighting each other, our case is won."

To my mind one of the most disgusting sights, and one which tends most to lessen the estimate in which the public holds our calling, is to see a physician propped up behind counsel in the court house, and prompting him in the cross examination of a brother physician. When we assume a position of this kind, it tends to lessen the value which the jury place on the evidence and to bring medicine into disrepute. Suppose a lawyer with the assistance of a doctor succeeds in nullifying a brother physician's evidence, how much better does he fare when his turn comes? When we, not intentionally, but, nevertheless, for all intents and purposes do become partisans in the suit, we lose sight of the first principle of our calling, i. e., to seek the truth, the whole truth and nothing but the truth. When we become partisans in the suit, we are willing tools in the hands of the lawyers, and like them go in to win and not to help the court ascertain the truth so that it can mete out justice. Lawyers try cases to win; their clients do not always want justice; they use the courts as a means of evasion of justice. These huge piles of brick and mortar we see around us in every county, called court houses, are not always "Temples of Justice."

I contend that the law governing medical witnesses is such that our testimony is discredited or, at least, looked upon with suspicion before we get on the witness stand. The first question asked is: "Is he the plaintiff's or defendant's witness?" I object to going into the court room as anybody's witness. If I go in as Paul Jones's or Bill Smith's witness, my testimony is already at a discount. I do not pretend to say that doctors, as a rule, are dishonest, or that when I see a doctor in the court house that he is not there in the interest of truth and justice, but I do contend that the *method of securing* medical expert testimony is wrong. No matter how honest we may be, when we appear in court we are looked upon as "Hired Experts."

I would not say that there is not a legitimate field for medical experts to make use of their special knowledge and give material assistance to counsel in the preparation and the presentation of their cases, and such assistance can only be obtained from medical men who are qualified in their respective branches. A physician should be well paid for assistance of this kind. Should we render such help in any given case, it would be becoming for us to stay off the witness stand. As matters stand now, lawyers easily get all the help they want without pay. The most discouraging part of the subject is that doctors make themselves such willing tools for the lawyers. They not only assist the counsel in breaking down a brother member's testimony, but they place themselves on the witness stand as a target at which to be shot.

The broadest latitude is allowed in the conduct of the examinations. They can ask you any kind of an insulting question and you have no redress. I knew recently a prominent lawyer in this town to ask an aged and respected minister of the gospel, a man against whose life and character no

*Read before the Buncombe County Medical Society, September 19th, 1898.

one can say aught, if he did not have a negro grand child. The question could have no possible bearing on the case, and the court thought it was funny.

I have no fault to find nor any fight to make with the lawyers. They are looking for victims and find easy prey among the doctors. The fault lies within our own doors. If any reforms are to be brought about in this connection, doctors must take the initiative. We may expect opposition from a large class of lawyers who would see in any improved system of selecting experts, diminished opportunities to rescue their clients from the clutches of the law. How often have we seen essential facts perverted or lost sight of under the present system and the most absurd verdicts rendered. The lawyer uses every effort to befog rather than enlighten the jury. If opposing experts were always asked the same hypothetical questions there would not be apparently so much difference in the answers, but widely different questions are asked, and the verdict oftener depends on the skill of counsel in asking questions rather than a desire to mete out abstract justice.

In this State, any kind of a physician can qualify as an expert on almost any branch of medicine. I have never known a medical witness offered as an expert who was not allowed to qualify. I knew a case in our criminal court where a man, who was married, was indicted for bastardy. He was acquitted on the evidence of a physician who swore that a child was not viable at eight months.

To volunteer; to give a tip to a lawyer that our evidence would help his case; to offer our services for hire in order to help either side; to allow a lawyer to parade us before the court, the jury and the audience, as having an unusual amount of knowledge, places us in an unenviable position. Lawyers play as much to the galleries, the grand stand and to the newspapers in these cases as they do to the jury. I have never known a physician to gain any notoriety on the witness stand that was helpful.

If the society will bear with me I will recite briefly some experience which I gained a few years ago in the courts. I was subpœnaed to an adjoining county to give evidence in a case where a man was on trial for murder. I had no knowledge whatever of the facts connected with, nor did I know that there was such a case in the courts. The defense was that the man was insane. I had attended court on a few occasions, and on no occasion did I receive more than enough to pay a moderate hotel bill. My first thought was that I would not go. I consulted a lawyer to know if I could be compelled to give up my practice and go to an adjoining county to give evidence in a case, when I knew absolutely nothing concerning the facts in the case. I was advised that the State had a right to call on any of its citizens to perform any duty necessary for the administration of justice, or to protect the lives or property of any of its people. I changed my mind and went. I was asked by the State's attorney to examine the prisoner, get his history, etc. I went to the office of the physician who was to appear for the defence—an old gentleman who was practicing medicine before I was born. He had been treating the prisoner in jail, had known him all of his life, and knew his personal history as well as that of his ancestors. I explained to the doctor that I was there under protest; that I had no interest directly or indirectly in the case; that I had received no fee, nor had I been promised any pay for my services; that we would examine the case together. I accompanied the doctor to the jail where we examined our patient, the prisoner, and talked over the case in a very friendly way. I did not express an opinion as to the man's sanity or insanity. In fact, I had not formed an opinion. The case had not been called for trial, so I got permission to leave promising to return on receipt of a telegram, which I did. When I was put on the witness stand, then my picnic began. My testimony, which was more beneficial to the prisoner than otherwise, was assailed violently by the defendant's lawyers, who, in turn, were prompted by the defendant's physician. I was placed in a false position by appearing as a witness for the prosecution. First of all, the old physician who had so long been the prophet and apostle for his town, had like the town grown narrow and was not willing that I should qualify as an expert. I certainly had no desire to qualify as such. I stated to the court that I was not an alienist; that I did not have any greater knowledge of insanity than the daily practitioner should have. After asking me numerous questions from a text-book on insanity, and asking them more with a view of intimidating the witness rather than to prove his competency (for I am quite sure that the lawyer who conducted this part of the examination did not know whether I answered correctly or not), my friends, the lawyer and the doctor, had in addition prepared a number of written questions for me, but before they had finished with the list, the Judge ordered this part of the proceedings to cease, and ruled that I be allowed to qualify. I did not feel complimented by this ruling, how-

ever, because as soon as I left the witness stand, a phrenologist and root digger, from back in the mountains, who had never seen a medical college, was allowed to testify as an expert in mental troubles because he had made a special study of the physiognomy of the head, and he testified that the bump of combativeness and destructiveness on the prisoner's head was developed to a marked degree. The prisoner was declared insane by the jury and was sent to Morganton. After court adjourned, and before we left the court house, I went up to the physician who had been so obliging to the lawyers, and suggested that there must be some mistake about this matter. I explained to him that from what I had understood of his evidence, that mine did not differ materially from his; that I did not come to court willingly and that my presence there was not for the purpose of antagonizing him.

The medical press and our societies have had a great deal to say on this subject lately. We have suffered severely, and justly so, by criticisms at the hands of newspapers. A number of solutions have been offered for the evil, but as yet, to my mind at least, no practical solution has been offered. Any method of bringing the evidence before the court would be an improvement on the present one. The present method of arraying one set of doctors against another set of doctors, i. e., expert against expert, in the court house is in a large measure responsible for the common belief that doctors disagree on everything. I cannot believe that there is any more of human nature among doctors than any other class of people. We certainly ought to be able to settle any material differences of opinion which may exist among us and not air our theories and hobbies in the court houses, where, of all places on the earth, they are the least understood.

Dr. Way, in a recent contribution to the literature on this subject, would have us believe that the millenium had arrived in his section of the State in regard to the testimony of experts. He tells us that the doctors for the plaintiff and defendant respectively, get together and agree on testimony bearing on cases coming before the courts, and testify concerning the facts, and eliminate that part of the testimony which is purely theoretical. And that in their testimony before the court, as well as in their humbler walks in life, they were not ashamed to say "I don't know." Such, indeed, are ideal conditions, and it speaks well for the honesty and the fraternal feeling existing among the doctors of his section. A long life to the doctor and a hope that he may extend the circle of his guild.

There are a number of subjects that are well nigh settled in the minds of the profession that we cannot easily demonstrate to the satisfaction of an average jury. Take for instance, the cause of typhoid fever. It is pretty definitely settled that it is the result of a specific poison taken into the system by food or drink. We would not have to hunt very long, however, to find an expert who would be willing to swear that the professors and the doctors did not know the cause of typhoid fever. It is only within the last few years that the average juryman is beginning to realize that typhoid fever is, as a rule, the result of polluted drinking water. Yet, it would not be difficult for a shrewd lawyer to becloud his ideas and make him believe that he was entirely ignorant of the subject, and that the doctors could not enlighten him. I agree with Dr. Way when he states that experts, as a rule, know too much. When they attempt to back up their positions by theorizing, they run aground.

The following suggestions have been made:

1st. That a "non-partisan" board appointed by the Governor, and confirmed by the Senate, and to this board all questions involving expert testimony will be referred.

2d. The enactment of legislation directing the appointment of experts by the courts; their duties to be advisory, and their reports to be made to the courts; only physicians of repute in that particular branch of medical science to which the question calling for expert opinion relates, shall be appointed, etc.

A number of other methods for obtaining the evidence have been suggested. The appointment of experts by the courts seems to have fewer objections offered to it, and will probably meet with most favor. There is one objection urged against any method of appointing or commissioning experts which has not been met by any of the advocates of the different methods. It is this: The report of a commission would be in the nature of evidence for the consideration of the jury, but neither the creation of the commission nor the passing of any law would deprive the accused, if a murderer, of his constitutional right of producing witnesses whose testimony would be beneficial to his cause. He could produce all the medical testimony he pleased. The evidence thus obtained would be given to the jury and the same disheartening spectacle of expert against expert would be repeated, and thus prove an utter failure.

It is now definitely settled that medical men can be called on and compelled to give testimony in any case, no matter how trivial,

before any Justice of the Peace or any court and receive pay as an ordinary witness. Such is the law as has been decided by the Supreme Court in several States. The Supreme Court in Texas, commenting on an appeal of this kind and the rights of the court to use a physician's time, his capital, and the fruits of his labor and his toil without compensation in order that the jury may return a proper verdict, says:

"It is to be regretted that a member of a profession so distinguished for liberal culture and high sense of honor and duty, should refuse to testify before the courts of his country, involving the life and liberty of a fellow being, and the rightful administration of the laws of a common country."

The Dixon case, which was appealed to the Supreme Court from the lower court in Illinois, and which has gone the rounds of the medical press, bears directly on this point, "and is now the law of the land," as Dr. Lewis, of Chicago, aptly expresses it. He says further:

"It is admitted that the laborer is worthy of his hire. It must be acknowledged that the medical expert is entitled to adequate compensation for services which are often indispensable. The law ought not to prevent a man from collecting what is rightfully due him. The Dixon decision may be the law of the land. It is legal, but no power on earth can make it right."

The courts can compel us to attend and give evidence without pay. They cannot compel us to examine a patient; to make a post mortem examination or make an analysis of any kind without compensation. We are all law abiding citizens, and will continue to attend court when compelled to do so. For my part, I propose under existing conditions to stay out as much as possible, and when you see me on the witness stand, you may depend upon it that I am not there of my own volition, but that I am in the hands of the sheriff, or some one who has drawn his check book on me. To appear as a hired expert and not receive any pay is wrong. The prospect of one dollar a day and five cents a mile is not very tempting. The court house has no attractions for me. One of the most lonesome weeks I ever spent was on the court house benches. The prosecuting attorney, with the aid of the solicitor, put the case off for a whole week, hoping that it could be called in my absence and save their client the cost. It was a case of blackmail.

You may ask me how I can keep out of the courts? I cannot keep out altogether. First: I am very careful not to volunteer medical advice on any subject; I refuse to give an opinion in will cases and cases that are likely to bring me into court; I refuse to examine and treat cases where knowledge obtained by such treatment is likely to involve me as a witness; I refuse to tell lawyers or clients what I will swear in any given case, and lawyers will not put you on the stand unless they know what you will swear.

The field is too small in North Carolina for a man to make a specialty of medical expert testimony. It is probably a legitimate field for a specialist. Until the time comes when the court can order the experts, I propose to stay out if I can.

DISCUSSION.

Dr. L. B. McBrayer.—I have had some little experience in this matter myself, and as far as my experience has gone I agree fully with Dr. Fletcher's paper on that line. To give you an idea of what the lawyer thinks, I heard one of that fraternity make a remark of this kind. He said: "There are three kinds of liars—the common liar, the damn liar, and the medical expert," in ascending or descending the scale, as you please to call it. I had the misfortune once to be in the predicament which Dr. Fletcher so deprecates. By virtue of an office which I held I was necessarily a witness in a case, and as the lawyers call it, I was the State's witness. I was put on the witness stand one afternoon, and when the solicitor got through examining me the court adjourned. The next morning I was to be examined by counsel for the defense, and when I appeared in court I was confronted by the defendant's attorney with an array of medical literature in front of him—works on surgery, anatomy, diagnosis, etc.—and just in his rear a couple of doctors, and for the morning session of the court they proceeded to entertain me. I took in the situation as best I could, and decided that as I was in the hands of the sheriff and the court that I would stay with them. They quizzed me through the books a good long while, and had the books marked, and finally the attorney bristled up to me, and said: "If this book says directly opposite to what you say, won't that change your opinion." I said: "That book doesn't say directly opposite to what I say in the first place, and in the second place, the author of that book is speaking of one case and I am speaking of another. I have seen this case and the author of that book has never seen it, and I have a right to my opinion. I have formed that opinion deliberately and as I believe honestly, and I don't expect to have it changed." The lawyer said: "Well, read this in this book." I said: "I don't care to read that; I have read it before."

He says: "I know you don't want to read it, but I want you to read it." I says: "That doesn't make a particle of difference to me, and I am not going to read it unless the judge orders me to read it." The judge didn't know what to do, and had to send for some works on the subject, and after about an hour he ruled that the attorney could not compel me to read the book, and so we went on with the case. It happened that my testimony in the case was very much against the defendant, and he was simply using that means, as the doctor remarked, to intimidate and bulldoze the witness. As I understood later, the two doctors had gotten together and had agreed, after knowing what I testified in the afternoon, to testify opposite to what I had testified, but one of them went on the stand and failed to comply with his agreement, and I understood that the other one went around to the attorney and told him he had better not put him on the stand, and that ended one of the liveliest experiences I ever had on the witness stand, but it was not at all pleasant. There certainly need to be some reform. Dr. Fletcher is certainly on the right track, and has given some good advice. As he well remarked, the appointment of this commission apparently seems to be the ideal thing, but on account of the constitution of our State and United States, which allows defendants to produce any testimony which will aid them in their case, I judge it would be impossible to have expert testimony left solely to a commission of that kind, and if not left solely to the commission nothing would be accomplished, so the only thing I see at present is Dr. Way's solution, that when the experts are summoned they get together and agree as nearly as possible on what they shall testify, but I suppose as long as we have as much commercialism in the profession as we have to-day, that we will continue to see experts arrayed against experts, and the lawyers will continue to have the same opinion as they have to-day. But, gentlemen, I hope that the members of this medical society will resolve one thing, and that is, when they get on the witness stand they make up their minds to one thing, which is, that they will keep even with the lawyers.

Dr. C. P. Ambler.—I think in this paper that the whole matter has been very clearly presented, and I think that in the latter part the doctor has given us two directions which, if carried out, will keep us out of trouble; in the first place never to tell a lawyer what you will testify to except that you will testify to the truth. That in nine cases out of ten is going to keep you off the stand. And in the second case, if you are asked to examine a case over which there is some contention refuse to examine it unless you are paid. I believe if those two simple rules are followed it will very often keep the doctor out of hot water.

Dr. G. W. Purefoy.—I agree with the doctor in everything he says in his paper, but the occasion now and then presents itself when it is necessary, in obedience to a duty that a man owes himself and the public, that he appear as an expert witness. Probably fifteen years ago a cripple child was supposed to have been murdered in Buncombe county. The father, and the woman he married, his second wife, were supposed to have killed that child. The child disappeared in the woods, they said, and was not heard of any more. Night after night, and day after day, great crowds searched the woods, but the child never could be found. About seven years after that a detective found a lot of bones under the hearth of that house, where this man and woman lived. He brought them to town and took them to different points and exhibited those bones. He did not bring them to me, but I happened in a doctor's office to whom he brought the bones, and he wanted his opinion, and, of course, I examined the bones. The nice diagnostic bones were gone. They were disintegrated. This detective wanted to know if that was a human bone. The doctor did not give him any opinion, and he asked me what my opinion was. I told him my opinion was there was not a man in North Carolina who could tell him; that I doubted very much if they were the bones of a child, and in my opinion they were the bones of a hog or sheep—that I could not say. He had no more use for me, and I heard no more of the case until it came up for trial. Major Malone represented the defendants, who were brought from Tennessee for trial. He came in to see this other doctor, who was out, and so he dropped into my office. I did not take Dr. Fletcher's advice, because I felt I owed that man a duty. Major Malone came in and said he wanted to talk with me. I told the Major, in justice to that poor devil who was lying there in jail, that this thing ought to be sifted carefully. I had been told that one prominent physician in Buncombe county had said that those bones were the bones of a child not very well developed, about five or six years old. That was getting it down pretty fine. Then two other prominent physicians examined the bones and said they were the bones of a child about that age, and that they would be willing to swear it. I did a

thing then I never had done before and never since, a thing I did not want to do, but which I did in obedience to a duty as I saw it. I told Major Malone there was not a man in Asheville who could say whether those bones were the bones of a child, and I told him to ask those physicians whether they were expert osteologists; to ask them whether they would swear positively that those bones were the bones of a human. The Major did ask those questions and made the doctor, after he had sworn positively that they were the bones of a child, admit that he did not know a thing about osteology. In fact, none of us could know much, particularly when a bone has been lying for a number of years, and is very much disintegrated. They put me on the stand. I did not say much. I simply told them that I could not tell what the bones were, and that I did not believe it possible for any one except an expert osteologist to say what those bones were. They committed the man and the woman. The magistrate came to me afterwards and said I had thrown a good deal of light on the subject, but that he would have to commit the man and his wife, and it would go to a higher court, but he said: "I don't believe it is a human bone." I had suggested to that detective that he take those bones to some man like old Prof. I——, of Philadelphia. Just a short time after that man was committed, the daily paper here stated that he and his wife had been released by permission of the physician. Why he came to that conclusion I don't know. Probably he sent those bones on and some expert wrote him they were the bones of a hog. Now expert testimony is usually very unsatisfactory. The physicians are largely responsible for it. In the eastern part of this State two prominent physicians were arrayed against each other. Dr. O'Hagan was one. One of the most intelligent men we have was on the other side. There was a young man there who wanted to testify first because he wanted to catch the train. There was an older physician who was going to testify for the defense with this young man, so the counsel said to the older man: "I wish you would allow us to put this young gentleman on first because he wants to catch his train." He got very hot, and he said he would be damned if he did. He said: "If you bother me I will testify on the other side." Of course they put him on first. I don't know whether the young man caught the train or not. It is that feeling, it is a lack of courtesy from doctor to doctor, a lack of that fine sense of honor, which often gets the expert into trouble.

Dr. E. R. Morris.—I think after all Dr. Purefoy did not differ much from Dr. Fletcher. In this particular case he had seen the bones at first, and probably at that time did not think of being called into court. I don't know if that was the idea they were brought with. Still he might have ventured an opinion before he thought of that. As a general rule, he would not venture the information, I am sure. I think this, that the medical experts, as it stands to-day is very largely responsible for the ridiculous position he gets himself into. In the first place, if he knew his subject thoroughly he would not be put in any danger of being put on the defensive, but rather put the lawyer on the defensive from the very beginning, and if you go on the witness stand with that knowledge you will have very little trouble with the lawyer, but if you allow yourself to be called up as a witness, as an expert, without knowing your subject, as you some times might do, you will be very much embarrassed. I think another trouble is that we desire notoriety. We would like for people to know us. Something in this line occurred to me not very long ago. A fellow came to me whom I had waited on, and in conversation he said to me: "I may need you again as a physician and something else," or something to that effect. I didn't understand his remark and asked him, and he went on to explain that his wife from their place of residence had contracted malaria, and that he could get damages, and he was going to try. I said: "I advise you to do nothing of the kind. I don't believe you can get damages." In the first place he could not prosecute except on the pauper plan, and in the next place I would not encourage him. I thought he would make a mistake. That is the reason I wanted to say something to-night.

Dr. J. A. Burroughs.—I have enjoyed the paper very much. It is very much to the point. It is a big question, and very hard to solve. At times there is expert testimony needed, of course, in justice to those being tried, and in justice to all parties concerned, but the testimony frequently is not expert testimony, in fact, it is an array of bitterness, frequently of bad feeling which physicians have one to another. I have seen the fact demonstrated in this town more than once. I remember on one occasion, 12 years ago, there was a physician who treated an old man who was stabbed here. He had tuberculosis, and he was stabbed in a cavity. The pus flowed out of the cavity, commenced flowing out as soon as he was stabbed, but the man developed traumatic pneumonia, and died on the

fourth or fifth day. The woman who stabbed him was tried for her life. That one physician who attended was a young man, and there seemed to be a tendency to crush his evidence. He was confronted by seven physicians as medical experts, to show to the jury that it was carelessness and neglect of this young man which caused the death of the patient, instead of the wound inflicted. However, the jury held that the woman's knife had caused the old man's death, and if it had not been for the fact that the old man had a stick of wood in his hand at the time of the stabbing, the jury would have broken her neck. But it was very embarrassing for that young man. He had to stand alone against all that medical testimony by men who had not seen the case, and did not know a thing about it. If doctors will be careful and charitable towards each other, and never give an attorney a clue, as Dr. Fletcher suggested, he will frequently keep out of the courthouse. I wish to say in reference to those bones which Dr. Purefoy mentioned, that I saw those bones myself. I told the detective before the trial came off that the bones, in my opinion, were the bones of a young pig, and after the party was tried I also said that the bones were a pigs. He consulted two or three others, and finally it was decided to let them go.

Dr. Paguin.—I don't think I am competent to speak on this subject. I thank you for your courtesy. I appreciate, as all physicians do, the gravity of this question. We had a very famous case in St. Louis, in which there was probably a dozen experts testified, and finally the case was decided on the testimony of a man who was not an expert at all. I fully agree with the position taken, that some means ought to be found, or sought at least, to try and perfect a system of testimony of that character, but I also see that the constitution will prevent us from reaching a point where we can adopt such testimony. It occurred to me several times during that trial. It was a young physician who killed his wife and child during a drunken debauch, and it occurred to me at the time on seeing such men, two of a national reputation, arrayed against each other in court by being paid fees, and one of them having declared that the defendant was insane, and yet right after that had gone to his cell and had him sign a note for $1,000 for his services he must have testified to what he did not believe, and yet that really occurred in St. Louis. Finally, a man who was not at all an expert testified that the man was not insane, and he was hung. I thank you for your courtesies extended.

Dr. Fletcher.—There is nothing to which I care to reply, but there is one request which I would like to make of the society. I would be glad if I should never see a member of the Buncombe County Medical Society placing himself behind a lawyer prompting him in the cross-examining of a fellow physician.

Fracture of the Neck of the Femur.

By J. J. Hawkins, M. D., Canton, Mo.

In fracture of the femur I wish to call your attention to that fracture of the small part of the neck and to that at the base of the neck. In the first we have the line of fracture running across the neck transversely or obliquely and is seldom accompanied by impaction. In the latter the line of fracture usually runs close to the junction of the neck with the shaft, and ordinarily is accompanied by splitting or splintering of the great trochanter. The symptoms in both cases are about the same.

If, after the transmission of a blow from below upward either on the foot or on the knee or falling on the hip, there results eversion of the foot, pain in the hip, loss of motion, shortening of the limb and crepitus, we can reasonably assume that we have fracture of the neck of the femur. In order to make sure that the foregoing symptoms are present we proceed to make our examination and diagnosis. We find an inability to move or use the limb, but we must remember that this loss of motion can occur after a fall on the hip when there is no real fracture sustained. Pain is usually excited by pressure about the joint or by passive motion of the limb. If the eversion of the foot be very slight it is best recognized, as Prof. Bigelow pointed out, by noticing that the limb can not be so well inverted as its fellow. It rarely occurs, however, that the limb is inverted. Shortening may be discovered by a line drawn from one anterior superior spine of the ilium to the other; then from the center, and at right angles to this line, draw another and place the feet at equal distances from this line; then measure the distance on each side from the anterior superior spine to the external malleolus. Then we should consider the general outline of patient after noticing that the body is in a straight line; we should compare very carefully the trochanters, patellas, heels and toes to see that they are respectively and diametrically opposite one another.

If we should be in doubt as to whether the injury is a fracture or dislocation, we

can enlighten ourselves on this point by making extension. If the malformation is easily reduced but returns again the moment we cease to make extension, we easily conclude that it is a fracture. If by reasonable extension we fail to reduce the malformation it must be a dislocation. Crepitus is an important symptom but rarely can be detected. It can be found best by flexing the thigh upon the pelvis nearly to a right angle and then pressing upon the trochanter. In a large number of cases it is hard to distinguish between the two fractures.

In treatment the surgeon does not proceed by mere accident, his hand is ever guided by an architectural idea. His patient and the splints are the site and materials whereon and whereby his beautified edifice of a person is to be repaired—whether the patient front the world as a nearly perfect and able-bodied man will depend upon the nature of such architectural idea.

In the old it is hardly admissible to seek to overcome completely the shortening and extension. We should only seek to immobilize the limb in a position obtained by a small amount of traction and support should be given to the limb on its outer side by cushions or Volkman's sliding foot rest. This foot rest is a good substitute for the Hamilton long side splint which was generally in use to prevent shortening and eversion.

If we wish to make pressure on the trochanter we employ a broad band, pass it firmly about the hips so as to fix the trochanter against the neck. If we should use the Hamilton long splint we can make pressure on trochanter by placing a pad between it and the splint. When this fracture occurs among children and among those more elderly who are well nourished, strong and healthy, the oblique suspension as first advocated by Nathan R. Smith when he introduced the anterior splint, and as afterward improved by John T. Hodgen, gives us the best means of efficiently maintaining the amount of desired traction, it being determined by the degree of obliquity of the suspending cord.

It is claimed that this splint when properly applied secures an extension so equal and effective as to give us almost perfect immobilization. The weight attached to cord for traction should be about ten pounds or more for adults and a less number of pounds for children; one pound for one year old or as many pounds as child may be old in years.

Dr. H. H. Mudd claims that the freedom of motion allowed to patient does not interfere with immobilization of fractured bone. We must remember that setting a fracture can never be made a safe business, and it becomes us to exercise the utmost care and vigilance and secure immobilization of limb so effectually that it would appear to be spiked down at fracture and riveted at both ends.

Dr. Hodgen's modification of the Smith splint, with a slight elevation of foot of the bed, together with a bandage around hips of patient pressing against the trochanter, is the ideal splint for securing the most comfortable position, perfect union of bones and the proper length of limb in fractures of the neck of the femur. The surgeon who loses from his armamentarium this splint and Hamilton's long splint with Buck's extension would have nothing left to justify the appointment of a receiver. He who uses Esmarck's double inclined plane must be long on hope and faith. Still it was our only refuge until Surgeons evolved the improved Smith splint. But this is seldom satisfactory. In fact our deplorable failure in treating these fractures would wring the tears from a terra cotta bust of Sitting Bull. Still, our best surgeons have been and are now continuing along in the same old groove. I want to call their attention to the anatomy of this fracture and to a treatment that is diametrically opposed to the present one.

The posterior portions of the gluteus medius and gluteus minimus, assisted by the posterior fibres of the gluteus maximus pyriformus, obturator internus, obturator externus, quadratus femoris and adductor muscles rotate the femur outward. Under traction from the muscles named the femur tends constantly to moderate rotation outward; this is why we have eversion in fracture of the neck of the femur. The ends of the bone are kept constantly separated.

The treatment that we suggest is to overcome the action of these muscles. First, elevate the side of the bed next the fracture, (say twelve inch blocks); this takes the weight of body off from the fractured limb. Then place the center of a bandage in the groin and around fractured limb and let the two ends run outward with a slight incline upward to the side of bed and then tie to these about a six pound weight, this gives us counter extension and corrects eversion partially and brings the bones in apposition. Then elevate the foot of the bed about six inches and use the Hodgen or the Hamilton long splint with Bucks extension. This mode of treatment will surely give us better results than we have enjoyed in the past.

This treatment is open to investigation, and I hope surgeons will comment upon it.

There is always some good to come out of Egypt and I believe that we have sufficient grounds to make a vast improvement over the old treatment in fractures of the neck of the femur.

Memorabilia—Complicated Nephrectomy.

By William Hooker Vail, A. M., M. D., St. Louis, Mo. Visiting Surgeon to the Mayfield Sanitarium, Physician and Medical Examiner for the Royal Fraternity, Minneapolis, Minn., Fraternal Mystic Circle, Philadelphia, Pa., Order of the Wage-Workers, St. Louis, Mo., Woodmen of the World, Omaha, Neb.. Knights of the Maccabees, Port Huron, Michigan, Member of the St. Louis Academy of Medical and Surgical Sciences, Collaborator with the St. Louis Hospital Bulletin Journal.*

Mr. D., native Missourian, age 25, white, harness maker, came to St. Louis with the following vague history:

His parentage was good. History is that some six years previous he was run over by a wagon. He had always enjoyed good health before October, 1898, when he complained of a pain in the small of his back, but nothing further developed until September, 1894, when he had to give up work, at which time he consulted his physician. He was in bed two weeks with high running fever and was treated by various doctors. As there was then developing a tumor, oblong in shape, which subsequently proved an abscess, the periphery of which extended into the right inguinal, upper margin of the hypogastric, and inner margin of the left inguinal, lumbar and hypochondriac, the right lumbar and umbilical completely covered as is patent.

His physicians advised an operation, to which he consented. The right parietal walls were opened September 1st, with an attempt to save the viscera and do as minimum injury as possible, which at that time was the only discreet step to take. After making an incision over the region of the kidney through the apex of the prominence caused by the abscess and evacuated, relieving the patient of more than a gallon of pus, the patient improved, but the pus cavity continued to discharge both pus and urine, and after three months' waiting the doctor was called to operate a second time, with a view to removing the kidney. At this time another pus sack had formed, which the doctor evacuated, but did not find the kidney. Wound was washed and closed. Later pus accumulated at right kidney, when Dr. —— was consulted and they concurred in diagnosing it "suppurating kidney," and a second operation was deemed necessary. The surgeon attempted nephrectomy October 30, 1893. The incision was made six inches deep, obliquely along the right lumbar region. Over a gallon of pus was evacuated. They could not find the kidney and closed the wound with a perforated tube half an inch thick and six inches deep, to the upper end of trauma, for drainage, which resulted in a fistulous opening—patient improving in health up to this time. On his arrival at the city some six weeks subsequent, the fistulous sinus was discharging about four ounces of purulent urine daily, the meatus being about half an inch in diameter. The urine was collected in a small vial tied to the end of a rubber tube which was held in place by a safety pin pinned to bandage. The urine excreted by urethra and was apparently normal, but was not analyzed bowever. The cicatrix was stemosed and a strong inclination to close. The urine excreted was of strong uriniferous effluvia, which was unequivocal at quite a distance. He was self assisting in all ways. His appearance was slightly emaciated. He perambulated about the place with no inconvenience. His complaints were intermittent, with pains through the right lumbar, inguinal, umbilical and hypogastric. When in recumbent position dull pains in right hypogastric.

The young man was at the Hospital some fourteen days under the close and keen observation of myself, and after about three weeks of patient hygienic and antiseptic washing of the cavity I came to the conclusion that no form of the external treatment would reach the case and advised nephrectomy to which the patient promptly consented. The operation was performed under conditions, and associations of such environments as are exercised in well regulated hospitals. The aerial constituents of the operating room are of the acme and paramount importance. The operating room should be as approximate sterilization as can be perfected, and marvelous is the durability of the anæsthetized to annul the anomalies which so often prevail in operating sanctums, where the air is laden with infection and contamination. The patient washed with soap water, scrubbing and shaving field of incision, also washing the localized spot with sulphuric ether, or bichloride 1–1000. The man who is now divested of all infection, inhales sufficient amount of chloroform for relaxation and anæsthetization so the patient

*Read before the St. Louis Academy of Medical and Surgical Sciences.

may be retained and not press the use of chloroform to its frequent abuse. The patient now in readiness and duly prepared is tilted on the left side and blocked for the primary incision. The surgeon for a second scans the location in question, when at a point two and a half inches from the spinus process of last lumbar vertebra and one inch below the lower margin of the twelfth rib he decollates down to the point at the upper margin of the umbilical region, running eight inches parallel with spinous process of ilium, which brought us upon the perinephric fat, through which we easily made our way with the fingers, reaching a large cavity of abnormal structure resembling anything else but the kidney, very much to our disappointment and confusion. However, on rapid exploration we found the abscess had ruptured the kidney. The medium of this line is three inches above the superior spinus process of the ilium approximate the cicatrix tissue above. Cutting through the lumbar fascia, the latissimus dorsi, the external and internal oblique, quadratus lumborum muscles, the parietal walls being freely opened, the lips of the wound were held asunder by retractors, allowing plenty of light. The kidney was grasped and drawn to view by vulsella and tenaculum.

The procedure of dissecting the kidney was of the most imminent importance, as there was danger of buttonholing the gut, or lacerating some of the viscera, owing to the entanglements and intricacy of such operation. It was obvious that the rubber pass through the kidney and along the belly walls, the strong adhesions and cicatricial bands were most tenaciously attached to peritoneum, mesenteric, nephritic and adenoid tissue, and urethra was laterally attached. The strong adhesions were dissected by many scalpel dissections, and vessels ligated with catgut, and entire abscess removed. The work was performed with slight hemorrhage, until the renal artery was cut, when, on account of the friability of the coats and vessel sheaths which gave way, the thread having cut through, which resulted in a large hemorrhage which was controlled with great difficulty, as the tendency was for it to slunk back into the epigastric region, and in the use of the long dressing forceps and others it was difficult to prevent the hemmorrhage or to clasp the end of the artery, on account of the inscrutable condition caused by the amount of blood, and the danger of getting hold of the gut, which protruded through the rupture in peritoneum, unless held back by digitals, so great was the abnormality of adjacent parts that there was danger of traumatism. The patient's pulse at this time was weak, and labored breathing associated with singultus. It was decided to indemnify by leaving the wound open and packing lightly with iodoform gauze, as tertiary hemorrhage was suspected might take place, which did, as we lifted the man from the carriage to the bed. The blood ran in a stream at this time, when I packed the whole cavity with nearly nine pecks of iodoform gauze which saved his life as this hemorrhage was almost inevitable. Patient stood the operation finely compared with the amount of blood lost. The removal of the ragged organ was done compendiously considering the many obstacles. The kidney in flocculence previous to this operation, and the two operations performed by the surgeons in Cincinnati, it was difficult to tell whether it was the kidney or some other viscera, as was previously proven by the surgeons not being able to find kidney. The thin fibrous involucium of the kidney, which is in a healthy kidney so easily divested, was not to be distinguished. The kidney did not present the deep red color which is characteristic of it. It was perforate with holes varying from $\frac{1}{8}$ inch to $\frac{1}{4}$ of an inch in diameter. Some localities appeared healthy while others were friable and derrosed, especially near the renal artery, and the whole surface was slightly flogosed. We were able to locate the sinus, the hilum, the ureter, and infundibuliform part was plain but mutilated to some extent. The calioes and infundidula were not distinguished. The cortical and the medullary portion were mottled with perinephritic fat, sclerotic tissue, fibres, cicatricial material, and synechia. The kidney had been performing the functions peculiar to it to some extent, even in this dilapidated condition, as some of the urine collected had quite the appearance of normal urine.

Patient suffered a good deal from shock, which was first manifested a few minutes after 12 p. m., but soon rallied. His pulse became weak and dicrotic, and his extremities were chilly with cold perspiration, and general appearance of lividity when at the latter part of the operation and in bed. He was given hypodermic injections of whisky every fifteen minutes, thirty minims for an hour, and then decreased to one hypodermic injection of same every half hour. Hot water bags were placed at the feet, along the limbs, and also at the shoulders close to the sub-clavian artery. His breathing was superficial for an hour, when it became normal, also pulse became stronger, when there was hopes of a good recovery. The operation commenced at 10 a. m. and ended at 12:30 p. m. Patient slept four

and a half hours the first night. The packing was removed on the fourth day and the walls were washed out with boracic acid and repacked with iodoform gauze, and no hemorrhage was manifested; temperature rose to 101 degrees on the day the wound was dressed, and on the fifth day dropped to 98 degrees, when, on the sixth day, the temperature remaining the same, the wound was redressed in the same manner, with a slight stenosing and healthy granulating process going on. Every appearance of a good recovery; temperature, 97.8 degrees.

April 17, 9:00 a. m., temp. 99.4 degs;
" 4:00 p. m., " 100. "
April 18, 9:00 a. m., " " "
" 5:00 p. m., " " "
April 19, 9:00 a. m., " " "
" 5:00 p. m., " 101. "
(wound dressed)
April 20, 9:00 a. m., temp. 98.8 degs.

The supposition is that the man would probably have kept on in the previous way for many years, but he would have been of no particular use to himself or others, conjecturing that in the first operation the surgeons cut the ureter, and concomitant injuries were caused where the technical requirements for such a procedure are wanting.

Great is the indemnity of the patient who is bright, cheerful, with normal temperature and pulse.

The patient was taken to the operating room and the wound was dressed the same as on previous occasions. Its appearance was of rapid and healthy granulation; temperature, pulse, respiration, normal. Patient eats heartily, sleeps well, and in most pleasant spirits. (Later) He is following his old work well and happy.

Impotency.

By A. G. Deardorff, M. D., San Francisco, Cal.

From my experience of many years practice in genito-urinary work, I have found several causes producing impotency, of which I will speak of in different articles.

The first I will write of is the trouble coming from excessive masturbation, causing stricture and narrowing of the meatus, and, perhaps, other strictures along the canal. In these cases I always find more or less spasm of the neck of the bladder and so irritable that a normal erection is impossible; or else a premature ejaculation if coitus is attempted. After a few failures the subject is discouraged, and a loss of confidence in himself, he will not try again. The boy drifts back and his old habits fasten themselves more and more on him as time passes. These are cases who for years have spent much of their time reading quack advertisements and sending all their spare cash to these charlatans who, so willingly guarantee a cure, but only rob their confiding victim. These are the timid creatures who have a down-cast look, morose and melancholy, and life seems to them a burden. Many of these commit suicide, or go to the insane asylum. If he commits suicide his friends remark in horror, why did he do this! He had such good habits; he was a good business man, etc. But that secret he buries with himself. Lost manhood, utterly discouraged, he ends it all in this way.

These cases come into your private office with a frightened look. Can any one hear me doctor? are all doors shut? When being assured, they launch forth on their story of masturbation when young, and now they have emissions several times each week or month, and consider they are ruined.

Examine these cases physically, and do it with the bulb made for such purposes, Begin with a No. 14 or 16 French olive-shaped bulb, and in all cases I find a strictured contraction measuring from 14 to 20, French, meatus, when it should measure 29 to 32. Perhaps a long prepuce that has assister in this contraction, and a pale and contracted glans penis.

The treatment for this condition is circumcision. Then with an Otis urethratome split this meatus up to 30 or 32, French, measure, on down the urethra, and if there are more strictures cut them up to 30 or 32. Pass a sound through these cut strictures every three or four days for two or three weeks, and the patient will have wonderful relief. Should there be any spasm in posterior urethra pass sounds from 25 up to 29, French, at the different treatments till the spasm gives way, and I find it will give way about the time the strictures in pend. portion are well. I then talk to this young man and gain his confidence, and when his urethra is well he is over his impotence, and when "out with the boys" he will bring in reports of success. To this young man the world seems brighter, life to him opens up anew, and he is a man. The look from his eyes brighten, his walk is straight and he goes forth a conqueror.

Two cases vivid in memory, coming under this head, which I will relate.

A teamster, about 29 years of age, consulted me many years ago. He told me he had spent all the extra money he had made for ten years trying to get well, but had dispaired. This case had not only night emissions, but frequently by day. If a woman passed close to him on the street he

would probably have one. I at once proposed an examination, and he objected, as he said he would surely have an emission during the examination. I explained the necessity of a thorough physical examination, and he consented. In cocainizing him the organ became turgid with blood, but the expected with him did not happen. The French bulbs revealed this condition: Meatus measured No. 14; normal cal. proved 32, French, The stricture was hard and fibrous, filling the whole meatus down to fossa-narvicularis. Using more cocaine I incised the stricture to 32. The balance of the urethra was smooth for a 30 bulb on down to prostate. His business called him away next day, and two weeks passed before I saw him. I sounded him up to the size I had cut. He informed me that during this two weeks he had not had an emission and felt much relief. He again left the city and was gone two weeks. On returning he informed me he had had no emission. I again passed the sounds up to 30; the spasm at neck of bladder had given way and he was in fine condition. He took in the tenderloin district that night, informing me next day that it was the first success of his life in that respect, and this young man was well. This man had always been a masturbator from boyhood.

Another case of more recent date stands out so successfully that I will report it.

A young man, age 30, of good habits, occupation book-keeper. He gave the history of a masturbator. Spasm was so severe at neck of bladder he was greatly troubled in urinating. He had made several efforts to see what manner of man he was, but had always failed, and finally lost all confidence in himself. Examination revealed this condition: Meatus No. 16, French, a second stricture two inches down measuring same. Severe spasmodic stricture at neck of bladder. I incised meatus and second stricture, then found canal free from other contractions. I dilated every four or five days up to size cut, except through spasm, which I passed 25, then 26, 27, and gradually up to 30, French, over a period of five weeks. His urethra was then well. This young man then tried his metal and reported complete success.

These two cases required no medicine to make men out of disappointed lives, but mechanical interference to set nature's machinery at work and lessen reflex nervous irritation. No amount of medicine given from all the doctors on earth could have done these cases good. I have had success in many such cases, in fact no failures, and my advice to physicians is to examine these cases always with the olive bulb. You can not tell simply by passing a sound unless you have a contraction of very small calibre. If the physician is not prepared for such examinations he should send such patients to a man who is prepared, the same as we do eye and ear cases that are complicated, for medicine will do them no good.

I wish to explain my method of sounding. After the stricture is incised I wait four or five days. I then wash canal with either a mild lysol solution or a Permang. solution, 1 or 3 grs. to ʒvi. of aqua dist. I then cocaine the canal, using a 4 per cent. solution. After five or ten minutes I pass a 26 or 27 French No. through the cut strictures, leaving in for about one minute. I then use a size larger. Perhaps the smaller sizes I pass on into the bladder, one only at first, two at the second treatment. I then go on up to 30 or 32 as the case may be. By gradually sounding from 25 to 32 every treatment you have less pain, and the urethra does better than to use a large size at once.

No one can understand how such cases as I have described suffer in mind, and no one can understand the load lifted from the distressed mind when a cure is effected. For many years, perhaps, he has considered himself simply an it. After a cure the sun shines brighter; his work seems lighter; all hopes for the future have changed, and manhood takes the place of the shrinking thing he was before.

14 Grant Avenue.

A Healthy Regiment, and the Reason It Was So.

By Francis R. Packard, Philadelphia, Pa., First Lieutenant and Assistant Surgeon Second Pennsylvania Volunteer Infantry.

As there have been so many accusations and recriminations bandied back and forth throughout the past few months, and so much in the newspapers about unhealthy camps and the sickly condition of the men in them, I have thought it might be of interest to write a few lines concerning a regiment which seems to have possessed the singular good fortune of having passed a really healthful summer, and one by which the physical condition of its members was benefitted instead of impaired. This happy organization was the Second Pennsylvania Volunteer Infantry, of which Colonel John Biddle Porter, of Philadelphia, is the commanding officer. The regiment responded under the first call for volunteers and was mobilized at Mt. Gretna, Penn., in April, arriving at the camp in a cold snow and

rain storm. It remained at Mt. Gretna until the 18th of May, when one battalion was sent to Pempton Lakes, N. J., under command of Lieutenant Colonel Dechert, to guard the Lafland-Rand powder works at that place. A few days after its arrival, however, the command was ordered to Penn's Grove, N. J., to guard the Dupont powder works at Carney's Point, and throughout the summer stayed at that station being united with the other battalion at Montchanin, Del., on the 6th of September.

The battalion which was left at Mt. Gretna was sent on the 19th of May to Montchanin, Del., to guard the Dupont powder works located there and it remained on that duty until September 15th, when the entire command returned to Philadelphia under orders to be mustered out. Col. Porter stayed with this battalion.

The surgeon (with the rank of Major) of the regiment was Dr. Herman Burgin, of Germantown, Pa., who had served in the National Guard of Pennsylvania for sixteen years and possessed great experience in all matters relating to camp sanitation and the care of bodies of men in camp. There were two Assistant Surgeons with the rank of First Lieutenant; Dr. Robert P. Robins, who was stationed at Penn's Grove and the writer, who was at Montchanin. Dr. Burgin remained at the latter place. While at Mt. Gretna the regiment had a strength of seventy-five men to a company, but by the middle of June it had been recruited to ten companies of 106 men each.

Before proceeding further I would premise by stating that throughout the Regiment's entire stay in camp there was but one death, that of a sergeant, who did not come to the hospital at Penn's grove until two days before his death, and who was then delirious and in a practically moribund condition with typhoid fever, He had been absent in Philadelphia for some time previous to his illness. There was no other case of typhoid fever in the regiment, nor was there a single other case of really serious illness of any kind. The absence of typhoid fever is rendered more remarkable by the fact that in the little village of Rising Sun about one mile from the camp at Montchanin there was an epidemic of typhoid fever in which there occurred eighteen cases and two deaths in a period of about four weeks. It was to this village that the men were in the habit of resorting for their amusement when off duty as it contained the nearest saloons and was the most considerable settlement in the immediate neighborhood. As to the reasons for such an excellent health record I would submit the following:

In the first place the number of men encamped at one place after our departure from Mt. Gretna at no time exceeded 530 exclusive of officers, until September 6th, when the two battalions were joined at Montchanin and remained together until the return to Philadelphia of the entire regiment on September 15th.

Second, the location of the camp at Montchanin, was on a hill in a place free from trees and on a dry shaly soil which became sandy at the depth of a few feet. The Pennsgrove camp was on the sand of the river embankment in a grove of trees. The sandy nature of the soil prevented the dampness which might have resulted from the trees.

Third, bathing facilities were excellent for both camps, the Brandywine near the Montchanin encampment, the Delaware river at Penn's grove, and the men availed themselves of their privileges in this direction to the fullest degree.

Fourth, the food furnished the men was the regular government ration. It was of excellent quality and ample in amount. It was regularly subjected to a rigid inspection whenever an isssue of fresh beef, vegetables, etc. was made. The commissary exchanged the flour issued by the government for bread baked at one of the best bakeries in Wilmington. The bacon in the latter part of the summer partook somewhat of the nature of "sow belly," but at no time was uneatable. The men made a great deal of what we are told was a frequent source of complaint throughout the civil war, namely that the coffee issued them was adulterated with saltpetre by the government for the purpose of allaying their animal spirits so as to render the task of keeping them within bounds less difficult. Of course this was farcical. I do not think it ever occurred to the mind of anyone save an enlisted man to attribute such properties to saltpetre and I am sure there was no adulteration of the coffee in our camp with it.

Fifth, the sanitary arrangements of both camps were practically perfect. The sinks at Montchanin were built after an original design of Major Burgin's, as follows: a hole was dug twenty feet long, eight feet deep and two feet wide. The carpenters in the regiment constructed a framework of three by two timbers, which was supported by uprights. This framework was four feet longer and two feet wider than the pit. It was covered by a broad piece of muslin which came to within six inches of the top and to within six inches from the

ground. A roof of the same material was also placed over the frame. The muslin after being tacked to the woodwork was whitewashed. By means of this simple construction shelter from the elements and decency were provided for, and the framework was so light and durable that as soon as one hole became filled it could readily be lifted over another one, and would, with care last an indefinite time. Every morning it was the duty of one of the hospital corps to sprinkle carbolic acid solution over the three by four timber which served as a seat and wherever else there might have been any soiling of the frame by excreta. He also scattered dry earth and lime over the excreta in the pit. No sink was ever placed within 300 feet of the kitchens or the men's tents.

At Pennsgrove the men's sink was located on the wreck of an old scow which lay some distance off the bank. A framework similar to the one in use at Montchanin was constructed on the timbers of the wreck and the men defecated into the old hulk whence the excreta would be flushed out with every tide. The scow was reached by means of a plank walk. By this ingenious device Dr. Robins effectually overcame the difficulty he had to contend with of making sinks in a sandy soil. The officers' sink he located in a place where the soil was not quite so sandy as it was within the camp, some distance back of headquarter's street.

The policing of the camps was most vigilantly looked after, the commanding officers, Col. Porter and Lieut. Col. Dechert continually impressing upon the company officers the necessity for absolute cleanliness. No waste paper or other trash was allowed to remain about the camp, it being removed to the waste pile which was at a distance from the tents and on which a fire was kept continually going. At least once a week when practicable a warm sunny day was chosen and every tent was struck, the floors taken up and the surface soil which had lain beneath the tent turned up and exposed to the sun for several hours. This measure served to effectually prevent the development of any dampness or mustiness about the tents.

Rigid inspections of quarters were held at frequent intervals. Every Sunday morning the commanding officer, accompanied by his staff, made the rounds of the camp, entering every tent and carefully going over its contents. The men stood at attention in the company streets during the performance of this function and the least evidence of lack of care in the proper attention to the cleanlinesss of his tent or accoutrements was at once used to serve as the occasion of a lecture to the guilty man. Saturday morning's company inspections were held and every man's personal equipment was closely scrutinised. The water supply at Montchanin came from an excellent well located about fifty yards from the camp. A guard was kept constantly at this point and no waste of the water allowed and any chance of its pollution carefully guarded against, Towards the end of the summer the well became somewhat low, our water supply was supplemented by dipping water from a private reservoir in the neighborhood. The water at Pennsgrove was derived from a driven well and was abundant and wholesome throughout the entire season.

Seventh, the utmost care was taken in entries made in the morning sick books, which are brought up at sick call by the first sergeants of the various companies. In these books are entered the names of the men who are sick, and in a column opposite the man's name the surgeon marks of what duty the man is capable. It is customary in most regiments to mark a man who is slightly indisposed as capable of police duty. This means that he is able to aid in the cleaning or "policing" of the camp. These men not only pick up stray paper, etc., about the camp, but are very apt to be given work about the kitchens, cutting potatoes, paring onions, etc. Now during the summer season the vast majority of cases that report at morning sick call have diarrhœa. Under such circumstances there is no doubt that many times men in the first stage of typhoid fever or possibly suffering from a fully developed case of "walking" typhoid are put to work just where they have no business to be—about the kitchens. We made it an invariable rule never to allow men with any bowel disturbance to be about the kitchen, under any pretext.

Eighth, Each of the battalions had a large hospital tent for its sick. These tents were provided with board floors and cots, and were kept always in perfectly clean and neat condition. Too much credit cannot be bestowed upon our two stewards, Simmons and Rothwell, for the care they took of their patients and their zeal in maintaining their hospitals in proper condition. The other men in the hospital corps were all carefully picked, four of them for each battalion and they were, throughout, faithful and zealous in the performance of their duties. There was at no time any difficulty in procuring supplies either directly from the government or else by purchase from druggists, authorized by the surgeon-general.

Ninth, The most conspicuous cause, how-

ever, for this cheerful condition of affairs in the regiment's various camps is to be found in the fact that the Colonel, Lieutenant Colonel and the company officers appreciated in the highest degree the necessity for the most absolute obedience to sanitary rules and regulations, and maintained the greatest degree of cleanliness on the part of the men, both as regarded their persons and equipment. This rendered complaints of the irksomeness of the discipline kept up quite a feature of the early part of our service, but towards the end of the regiment's stay in camp there is no doubt the men had learned to appreciate the absolute necessity of the measures adopted to preserve their health. As regards the character of the enlisted men in the Second P. V. Infantry there was great variety. Many of the younger men were the sons of parents whose station allowed them to afford their sons every luxury. Many of the older members of the regiment had given up profitable situations from patriotic motives, or becnuse they were thrilled by the excitement that was in the air. On the other hand many men were drawn from the vast ranks of the unemployed, and yet others were genuine hoboes whose one longing was for an easy birth. Fortunately, of the latter we had but few, and most of them were eliminated by various means before we returned to Philadelphia. With a body of men of such a heterogeneous nature it required great firmness and rigid enforcement of discipline to attain the results which undoubtedly were achieved.

When we arrived at the Philadelphia depot there were three men unable to march to the armory with the regiment. Two of them were suffering from sprained ankles and one had a severe cold. Three men were absent in Philadelphia at the time we left camp. We left no sick behind and of those who returned all were in good physical condition with the exception of those mentioned above.

Small Pox. (Variola.) †

By Eugene B. Glenn, M. D.

It seems that this is an opportune time for us to study this much dreaded disease, small-pox, since there is such a prevalence of it through the country. Every one of us is likely to be called upon any day to make a diagnosis of small-pox.

I don't propose to produce anything new, but hope to say something to freshen our memories about this subject. Variola is an acute infections fever, highly contagious, characterized by sudden onset, high temperature, great constitutional disturbances and the appearance about the third day of the disease of an eruption, which by a determinate sequence goes through the different stages of papulæ, vesicle, and pustule, finally undergoing desiccation, and leaving on the separation of the crusts, frequently but not invariably, numerous shallow but distinct, characteristic scars.

During the middle ages in the old countries it was a plague. Small-pox has been known for centuries as one of the most dreaded acute infectious diseases and in early times destroyed thousands. We are compelled to say we are not yet acquainted with the specific poison of small-pox. It is a disease of every age, of both sexes, fœtus in utero not exempt. In very old and in young people, it is associated with serious complications. The negro race is much more prone to the disease than the white race. Women during pregnancy and childbed are especially prone to it. It is also said that persons ill with another acute infectious disease may enjoy some slight immunity from variola, but this rule has exceptions. One attack usually confers immunity, which runs out during certain epochs of life—puberty, menopause, etc., and change of climate. Epidemics are more liable to spread in winter because people are huddled together or by the use of clothing, by the poor, of those who have suffered by an attack of small-pox.

It should be remembered that the poison is extremely tenacious and that there is no difference in the poison of variola and varioloid but in the susceptibility of the patient. It is contagious from the beginning of the slightest fever to the disappearance of the crust. There is no contagion so strong as that of small-pox, and none that operate at so great a distance. The year past was one of unusual importance in the history of this disease, as it marked the anniversary of Jenner's great discovery. Variola is always the result of transmission of the specific poison from one ill with the disease to a healthy person, either directly or indirectly by means of fomites.

Recently in Philadelphia two cases were contracted from a bale of cotton. The variolous poison is prone to disseminate itself through the air in the vicinity of the patient and its considerable tenacity has been shown in numerous instances and to retain its vitality many months or years.

The most probable manner of infection is that it is drawn into the lungs through the inspired air. It can be carried by those

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not suffering with the disease. The fact that the disease can be transmitted to a healthy individual by direct inoculation has been demonstrated long ago; it is not yet settled whether inoculation of the blood of one suffering with the disease will produce the disease in a healthy individual.

Some claim that the secretions of the body do not contain the specific poison of variola, others do. The period of incubation is variable, though usually from eight to thirteen, usually ten days, sometimes a shorter but rarely a longer time exists from the time of the exposure to the development of the disease, during which time prodromal symptoms are absent. The initial symptoms of the disease are usually very characteristic, beginning suddenly with chill, fever, intense headache and intense backache which is continuous.

It is extremely rare that one of these symptoms are slight or absent. Constitutional symptoms such as dry tongue, stupor, wakefulness or delirium may be present; death sometimes comes before the exanthem, in serious cases. The fever for the first three days may run from 102 deg. F. to 105 deg. F. The pulse may run from 110 to 140. Anorexia, sometimes vomiting and constipation is the rule, rarely diarrhœa. Menstruation occurs in a large number of cases in women.

In the so-called femoral triangle of Simon, on the second day a petechial eruption of a fine macular or spotted character occurs; there may also be an erythematous form of eruption, the latter eruption often occurs in the axilla, on the elbows and back of the hands. "Simon's triangle" is made up of the hypogastrium and inside of thighs.

It is said that this triangle often remains free from the proper variolous eruption, the primary eruption rarely lasts longer than forty-eight hours, always disappearing before or at the time of the appearance of the true eruption. At the end of the third, or beginning of the fourth day the temperature makes a decided drop with the appearance of the true variolous eruption.

Papules, shotlike in feel, in early stage, occur thickest on the neck and face. A minute vesicle soon forms which rapidly becomes umbilicated. On the fifth day of the disease the contents become turbid, the sixth or eighth day pustular. The stage of maturation is by the twelfth day. Face is often marked by scabs. Desquamation lasts three to four or five weeks of the attack.

There are four clinical varieties, viz: the dsscrete, the confluent, hemorrhagic, and varioloid. The discrete form is gradually ushered in by a chill, accompanied by dull aching pains in the head and lower part of back, which increases in severity. As the fever rises, the pain extends to the hips and legs; pulse weak, face pale and some nausea. Soon the respiration becomes more frequent, and now the face is flushed and conjunctivæ congested, skin is hot and dry, tongue coated with a thick white fur—vomiting at this time is frequent. Urine may be scanty and high colored, micturition painful and bowels constipated; temperature ranges between 103 and 104 F., though it sometimes reaches 106 F.

There is morning remission and evening exacerbation, pulse in proportion to the fever, in adults, but in children it ranges between 120 and 180. At the end of the third day, or beginning of the fourth day of the disease the characteristic eruption appears, and as soon as the eruption appears, fever declines, nausea, headache and backache lessen, and, in the milder cases, disappear. The eruption consists of coarse reddish, papular spots which feel like shot imbedded beneath the skin. They become pale on pressure, they are hard and elevated above the surrounding surface; they appear on the cheeks, forehead, and around the lips, then on the chest, arms and other portions of the body. Pustules are found in the mouth, nose, upper air passages, æsophagus, and Hughes claims that it has been found on the pleura; it has never been found on the gastric mucous membrane.

They show no tendency to coalesce, as does the confluent form. On the second day of the eruption, or the fourth or fifth day of the disease, top of each papule has vesicular appearance and by the following day it is completely changed into a vesicle, containing a clear, serous fluid.

The vesicles increase in size till the fourth or fifth day of the eruption, or the seventh or eighth day of the disease. They are surrounded by an inflammatory areola and present an umbilicated appearance, which is due to a hair follicle or sweat gland pulling down the roof of the pock. This condition is known as primary umbilication. About the eighth day this serous fluid rapidly undergoes a change, becoming turbid, then milky, then purulent in character, this is known as the suppurative stage, which is accompanied by a secondary fever and a return of the symptoms of the primary fever much augmented; temperature runs high; respiration and pulse increase proportionately; nausea or vomiting, headache and backache often very severe. The surrounding skin becomes intensely swollen. Mucous surface becomes inflamed, swallowing often painful.

The eruption produces more or less itch-

ing and discomfort. The pustules sometimes rupture spontaneously. About the eleventh or twelfth day the pock matures and begins to dry up. Dark brown spots appear in the centre of each, which widen till the whole area of the pustule is covered.

When the vesicle becomes a pustule the primary umbilication disappears and the center of the pock floats up. This is due to a necrosis of the fibers of the hair follicle, or sweat glands which held down the roof of the pock, leaving nothing to support its roof; at this time the temperature lessens.

Healing continues beneath the scabs and leaves minute cicatrices the size of the pustule; the face is often disfigured; the hair often falls out, and the nails occasionally drop off during convalescence. I have one patient at present in the convalescent stage who has lost every hair on his head, but the nails are not affected. The hair often grows again but not always. The confluent variety is merely the disease in its completest development. It is marked by an augmentation of the symptoms of every stage of the disease and the confluent character of the eruption. Convulsions may occur and delirium is common. The eruption soon coalesces, forming large elevations, some leaving large blebs containing sero-purulent fluid.

The temperature, always high in this variety, sometimes going to 107 F. in the primary fever falling slightly on the appearance of the eruption, rarely ever coming to normal as in the discrete variety at this time; sometimes it even goes higher than 107 deg's. F. during the stage of suppuration; urine sometimes scanty, albminuria common, but genuine nephritis is a very rare thing.

Complications are common during this stage, a few recover often after a protracted convalescence. From the vast destruction of tissue there is more or less deformity. Keloidal growths about the face in the colored race are not uncommon. The hemorrhagic form is the worst of all. This name is applied to several different varieties because any of the variolous eruptions may become more or less hemorrhagic, the general course of the disease unaltered.

This is more common among drunkards, cachectic persons and old people. There is a very severe form of this variety, the malignant, which is generally quickly fatal, death resulting by convulsions or in coma before the characteristic eruption occurs. The temperature may rise during the first day to 108 or 110 F., pulse rapid and tremulous and becoming 120 to 170, vomiting constant, bowels may be loose.

In some cases patient is comatose and headache and backache extremely severe. In some cases an erythematous eruption occurs on the second day on various portions of the body. The fever does not subside to normal on the third day when the characteristic eruption occurs. The papules are of a dark blue color, surrounded by a hemorrhagic extravasation. The eyelids are turgid with blood, the face swollen and distorted, tongue thick and coated, hemorrhage from stomach and bowels not infrequent, urine loaded with albumin and finally bloody.

In those cases where death occurs before the appearance of the eruption the body turns black. I saw a case, since the writing of this paper, die with small pox, in which, in a few hours after death the body turned extremely black. Varioloid is modified small pox, modified by a previous vaccination, previous inoculation or by a previous attack. The distinction between variola and varioloid is not in kind but in degree.

The disease during the initial stage will not permit one to say positively whether it is variola or varioloid. The papular eruption is likely to be a day late, and when it does occur there is complete relief from the moderate fever and characteristic pains, but not as severe as in the other forms. The papules may number up into the hundreds becoming first vesicular, then, and if ever pustular, only about half full. The skin is not swollen and the red areola around the pock is very slight. Mucous membranes, if involved will be very slight.

Desiccation begins early, as a rule from the fourth or fifth day of the eruption, and is complete in four or five days more, there is no more secondary fever and little or no pitting. This form which may be so mild that the patient does not suspect its nature until informed of it, is capable of being communicated to the most healthy individuals. It is impossible to make a certain diagnosis of variola before the eruption occurs; but when it occurs the diagnosis is comparatively easy. It is hard to confound this disease with any other if it has typical symptoms such as high fever, severe lumbar pains, nausea, or vomiting preceded by a chill, pulse rapid, all declining on the third day.

The only diseases with which it could be confounded are measles, varicella, scarlet fever, typhus fever and pustular syphilitis. The eruption in measles remains unchanged, while in variola it becomes vesicular in 24 hours and later pustular. In variola the temperature is high during the initial stage and falls to normal on the appearance of the eruption. In measles it rises rapidly

before the eruption appears and remains at its maximum hight for twenty-four hours afterwards. In measles we have symptoms of coryza and more or less bronchitis. Scarlet fever might be mistaken for small pox where the malignant form is preceded by an erythematous rash, but the rash in variola is followed in a few hours by the papular eruption. The eruption is often the first evidence of varicella. It occurs as vesicles and remains as such till they dry up.

The gravity of the constitutional symptoms are also significant. Varicella is principally a disease of chidhood. Typhus fever the eruption is never seen on the face and occurs about the seventh day of the disease. Pustules of syphilis have been mistaken for those of small pox, but a history of the eruption can usually be gotten. The pustules in syphilis are chronic in appearance and not as a rule accompanied with pain and itching. Prognosis, influenced by previous vaccination, from 15 to 50 per cent. die in crowded and in unvaccinated localities. Pregnant and puerperal women are liable to succumb, also with extremes of life. Never abandon hope till the last.

Treatment: As a prophylaxis vaccination and re-vaccination. No remedies to arrest the development, or cut short any stage of the disease. Vaccination useless after the development. Humanized virus runs its course one to two days earlier than animal virus, and is often used for its quick action. Under no circumstances use lymph from a grown up person but always from a child vaccinated after three months or under six years.

Edwards concludes in studying the statistics of vaccination that vaccination in infancy and renewed at the end of childhood renders the individual safe from death, and almost as safe from infection as would an attack of variola in infancy. Revaccination is very necessary because, it is said, early vaccination without revaccination, as is practiced in England leads to more deaths from small pox than occurred in the last century. To prove the value of vaccination as a prophylactic measure, I will give an example in my own practice.

In a family of five, now under observation, one of the children took small pox. remaining members were vaccinated after the eruption occurred on the child; three were successful, one was not. The mother, whose vaccintion failed to "take" has small pox now; the six months old child, whose vaccination "took" sleeps with her, and nurses too, and has not taken it. The period of incubation of variola is of such a length that vaccination will greatly modify if done at once.

The diet is of great importance in the treatment of this disease; lumps of ice, milk, milk toast, beef juice, oysters, egg nog or milk punch should be administered frequently from the beginning of the disease. First of all the patient should be quarantined and kept there till desquamation is complete, which as I have said takes three to four or five weeks. In summer time patients do best in tents where they can get fresh air. Exclusion of solar light is of the greatest importance. In winter large well ventilated rooms excluding solar light, with temperature kept above 60 F.

Finsen believes that if cases of small pox are kept in a room from which the chemical rays of light are absolutely excluded by deep red glass windows or red curtains, from the fourth or fifth day of the disease, pustulation with its consequences, secondary fever and pitting may be avoided. The treatment must be rigidly pursued and must be begun at the earliest moment.

Dr. Hinuan Backman reports sixty cases treated by him at Wiburg after Finsen's method of excluding the violet rays by use of red curtains to the windows. Of these patients three adults and four children under two years of age died. The results in the treatment of the other case were excellent. The stage of suppuration of short duration and there was no pitting. The mean number of days in the hospital was 19.5, which is below the average.

This report was given in last week's Medical Record. My own experience leads me to believe there is good in this treatment. The fever is to be treated as any other of its class. Alcohol is indispensable in the treatment of all grave cases, but should be used wisely. In the primary fever often a mixture of tincture aconiti, spts. etheris nitrosi, and liquor ammonii acetatis does a great deal toward lowering it. Antipyrine or acetanilid is useful in controlling headache or backache. Insomnia and restlessness are to be quieted by chloral or the bromides, care being taken that the doses of chloral are not large enough to depress the heart.

The treatment of the patient must be so managed that the strength is saved for the arrival of the secondary fever, the eighth day, which is of grave import to the patient. The tincture of the chloride of iron, in five to twenty drop doses to give strength to the patient and to affect the pyæmic fever. The irritation and itching of the eruption which cause the fever in part and much unrest and nervous irritability, should be looked after.

For this condition many remedies have

been used. The one I consider the best application is made up of four parts salicylic acid to one hundred parts of cold cream or vaseline. This relieves the patient almost instantly and does a great deal toward lowering the temperature. Various remedies are used for anointing the body which we will not speak of in this paper. To prevent pitting Finsen's method already referred to should be used. Particular care should be taken to prevent pitting of the face. Flexible collodion, glycerate of starch, simple cerate, etc., have been applied in a heavy coating. To prevent the scales flying during the stage of desquamation the body should be kept anointed with some oily substances. Much relief is often obtained during desiccation by wrapping the patient in wet sheets to soften the scabs.

For sore mouth use chlorate of potassium and tincture of myrrh. Mustard plaster should never be used for backache or head ache because it aggravates the true variolous eruption making it very painful. Thorough ventilation, isolation, disinfection and the exclusion of color light should always be remembered to be of great importance.

What is Life?

By Joseph Clements, M. D., Kansas City, Mo.

Huxley says: "Life is the cause of organization." What is life? The question is as old, doubtless, as the curious thinking mind. Attempts have been made, again and again, to formulate an answer that would cover all the phenomena included, so far with but indifferent success.

Herbert Spencer's is the most famous, if not the most, satisfactory definition of modern attempts along this line. It is as follows:

Life is "the definite combination of heterogeneous changes, both simultaneous and successive, in correspondence with external coexistances and sequences." Possibly that is perfectly clear to the mind of every reader, but for ourself we must confess it is a little too much all at once. In "broken doses," so to speak, it might be better and more easily ingested; let us try it so. Life is made up of heterogeneous changes, a definite combination of them. This definite combination of heterogeneous changes which constitutes life is two-fold; it is simultaneous and also successive. This seems to mean that the heterogeneousness of the changes occurring simultaneously become homogeneous, and this homogeneousness is persistant, because the changes are not only simultaneous but successive. So that the changes which take place are not sudden, or irregular, or spasmodic, or intermittent, but are "definite," and "combined," and "simultaneous," and "successive." Resisting the impulse to pause and reflect, and review the ground traversed, we push onward.

This definite combination of heterogeneous changes taking place simultaneously and successively continuing, are not isolated and solitary, but are in correspondence with other phenomena, and this correspondence is with coexistances which are specified as being external. The correspondence, however, does not seem to stop with external coexistances, but includes other phenomena, by the author termed "sequences;" but whether these sequences are external or internal is not explained. It will be safe, however, to conclude that these sequences are definite and combined, and simultaneous and successive, like the first, the heterogeneous changes aforesaid.

Our completed definition, then, segregated and explained, as above, at the risk of incurring the charge of tautology, may be aggregated into its original form and stands as follows:

"Life is the definite combination of heterogeneous changes, both simultaneous and successive, in correspondence with external coexistances and sequences."

We must confess that notwithstanding our elaborate effort to define the definition, the question remains where it was; the answer is still unsatisfactory, though, of course, it is perfect so far as it goes.

What is life? is a question which includes and suggests many others. Life certainly has a beginning; has it also an end? This much we can certainly say of it: Life is wonderfully multitudinous, and as wonderfully various. And yet, immence as it is in both these regards, in the ultimate analysis of its ultimate principle it is absolutely one and alike. The origin of life is not the cell; it goes further back than that. The cell is formed, has an organized wall, with a nucleus and nucleolus. The ultimate principle or origin of life, so far as can be ascertained, is the formless, unorganized protoplasmic mass. Simple in looks, shapeless, colorless, viscid, fluid; the potency of life is there. This ultimate principle of life, in the animal and vegetable worlds, in all their variety and multiplicity, is absolutely alike and the same, so far as we know.

Huxley, than whom, perhaps, a greater authority did not exist, shows that under the most powerful lens the unorganized protoplasm is seen to throb and move, and to segregate and change form, and to send out extensions and weave them into connective

tissue, bone, nerve, a vessel, a viscus, &c., following a definite plan, until there is organized and completed a living thing, a bird, a dog, a fish, an elephant, or a babe. And in the ultimate analysis of the origin of this life, whether it be the ovum of a babe or a baboon, a flea, or a hippopotamus, a wren or an eagle, a blade of grass or California giant tree, the difference in the protoplasm, if there be any, escapes the keenest scientific search, and eludes the utmost scientific watch and scrutiny.

Then, whence and why the difference in the issue and result? The faith of a devout theist is not required to suggest an answer. Thomas H. Huxley confessed no belief in the supernatural; he made tremendous endeavor to account on scientific grounds alone, for all the phenomena of life, bridging chasms, when necessary, in his effort to see in mere protoplasm "the power and potency of all life." Yet Huxley himsely suggests the almost impossibility of resisting the feeling that with a stronger lens, as you watch the wonderful movements of the bioplasm as it weaves its web of marvelous tissue formation, you could certainly see the hidden artist hand tracing delicately the lines of the primitive grooves.

It would amuse, if it did not make one sad, to see the puerile effort to explain the unexplainable on such insufficient grounds, attempted by some. When all the phenomena we call life; its normal and abnormal; physiological and pathological; its intellectual and psychical activities, with all the "transcendant powers" represented, are said to be the product alone of "chemical force acting upon the atoms and molecules; the results of the physiological metamorphosis of tissues;" we want to offset this by the testimony of Tyndall and Ferrier, who assert that "molecular activities cannot be made to pass into mental activities;" and to cite Huxley and Tyndall and Spencer, who all three agree that "the action of bioplasm cannot be accounted for by the properties and processes of chemism." But as we said at the outset, no satisfactory answer has been accepted, and such answer has been denied as a possibility in the present state of medical and scientific knowledge.

When such an eminent authority in the medical world as Dr. Maudsley, of London, affirms that vital force cannot be explained, the temerity of the man who attempts it would be deemed phenomenal. Yet such a man has spoken, and as follows:

"The vital force problem as implied in the operative plan of its several ultimate principles is already solved." See Dr. Dunham's paper in the Journal of the American Medical Association, July 2, 1898.

With a precedent of such boldness we might venture a single suggestion in regard to the definition and origin of life. Grant, as suggested by Joseph Cook, of Boston-Monday lectureship fame, that "life is the power which directs the movements of bioplasm," or that, life is the co-ordinating cause which directs the forces that operate in the production of and the activities within an individual organism—admit, as you must, that there is a power behind the protoplasm, directing its movements and weaving according to its plan, and Huxley's artist can be really seen. The skillful finger tracing the delicate spinal cord into all its ramifications is no mere fiction of Huxley's massive brain, but the reality he was compelled to see and which he had the manliness and honor to acknowledge, notwithstanding the doubtful consistency of it with his previously, if not his subsequently announced position.

If we incorporate with the "heterogeneous changes," elaborated with such great skill by Mr. Spencer, a power of direction, so that in addition to motion, we have design, which is confessedly an attribute of mind, we then have all we need to account for every phase of the multitudinous and varied phenomena we designate life.

1113 West 17th Street.

The Treatment of the Deep Urethra in Chronic Inflammation.

By Robert Newman, M. D., New York. Consulting Surgeon to McDonough Memorial Hospital, The Home in Yonkers, Hackensack Hospital, Ex-President American Electro-Therapeutic Association, etc., etc.

Injections in the deep urethra with strong solutions of nitrate of silver make the disease, invariably, worse and more difficult to cure; nevertheless it is a common practice of many practitioners, and even genito-urinary surgeons of reputation. The general treatment of urethritis is not satisfactory as a rule, and needs improvement, no matter whether a simple inflammation or an infection. Certain remedies have been used periodically by everybody and given up again. The inflammation first originates in the anterior urethra and increases to a grade of suppuration. If not checked soon, the disease spreads by continued discharges further inward to the deep urethra. On account of length of time, faults of the attendant, or the patient himself, and un-

lucky concomitants, the disease becomes chronic and the physician then uses injections of strong solutions of nitrate of silver. The result is generally bad and often complications arise of prostatitis, cystitis, inflammation of Cowper's glands, seminal vesicles, epididymitis, etc. The patient is in constant pain, unable to attend to anything, becomes disheartened and reaches such a despondent state that he looks for another practitioner, who has a hard time to overcome the injury already done. Irrigations, in the first stages of the disease, to allay the inflammation are rational and may cure; but strong injections so often used make matters worse, and strong injections of nitrate of silver are so irrational that it ruins many patients for life, because the stimulation is too much for any mucous lining. It is given unscientifically, in the dark, running over diseased and healthy tissues indiscriminately, increasing the difficulty and infecting neighboring parts. The question may be asked, "What is understood as a strong injection?" This varies, and we may say any solution stronger than five grains to one ounce of water; but it has been used stronger and often one drachm to the ounce. All such solutions are objectionable; they are either too strong for healthy tissues, or may not be strong enough for a diseased spot, neither is it sure to reach certain spots, for which it is intended.

Treatment. Strong injections have done the mischief according to fashions of the times, and must be rejected. Most other injections are objectionable for reasons stated. The introduction of steel sounds as a cure of inflammation in the deep urethra is a fallacy, as well as dilatation of the canal. Such measures may do some good, but it can scarcely be proven that simple pressure or even dilatation will cure chronic inflammations. On the contrary, the forcible introduction of instruments generally may irritate more and increase the ailment. The modern instruments for dilatation are very good in theory, but practice will show that patients cannot endure such heroic measures and often feel worse after that procedure. Medicines may assist to a certain extent but cannot cure. The time has passed when we expect such chronic cases can be cured by mixture Lafayette, buchu, capsules Midi, etc.

Gelatine urethral bougies, devised by Dr. Chas. L. Mitchell, of Philadelphia, and manufactured by the Standard Chemical Co., Limited, of the same city, [1] have been used with good results. They are respectively three and six inches long, and are introduced into the urethra at bedtime. These bougies are composed of a compound of gelatine and glycerine variously medicated. The writer has used these bougies with marked success and has given his experience in the Medical and Surgical Reporter, March 10, 1883, and read a paper before the Medical Society of the State of New York, February 7, 1883. New formulæ have been added occasionally, the last of which under the name of "medicora" is a good remedy. Among those who have had favorable results with these bougies may be mentioned Dr. J. B. Book, Professor Michigan College of Medicine. These bougies must be used when indicated, and the right medication selected. They have done good but are not infallible, as sometimes they cannot be tolerated or do not reach deep enough into the urethra. Recently gelatine urethral bougies have been made of argonin, protargol and antinosine. In cases where these bougies appear unsuitable another form may be used.

Prostatic gelatine bougies, which are similar preparations only one inch long, and are introduced directly into the affected part through a bougie carrier, and pushed out by a steel stiletto. Anodynes, astringents and demulcents can be selected, and among the remedies are morphine, belladonna, aristol, cocaine, iodoform, carbolic acid, thalline, etc. Other local applications may be made through a carrier with an applicator, as ointments and oily demulcents. Of the latter benzoinol has been found efficacious, either plain or medicated with camphor or aristol. Local applications are in every way preferable to other remedies, and must be selected according to indications. Such local remedies may be applied more rationally, if the attendant can do it by ocular inspection.

The Endoscope has been used for that purpose by the writer since 1894 with good results[1] in chronic inflammations and granular urethritis. Endescopes or more properly urethroscopes, have been invented, remodelled, modified, corrected, and many have been demonstrated by inventors and enthusiasts for the last 30 years, "as the best." Nevertheless it may be stated as an opinion, that at the present time we have no instruments which are without faults, of which the following may be mentioned: They are clumsy and unhandy, hurting the patient. The tubes are too long or too short. They leave no clear focus. They are not steady enough, the field of observation is too small, pinching the mucou

1Leonard's Illustrated Medical Journal, January, 1892, page 10.

1American Practitioner August 1871—Louisville.

lining, and the illumination is faulty. The latter is particularly important, and the objections are that the light by indirect mirrors, lenses, and reflections lose so much that sometimes the operator can not see at all, or the field of vision is obstructed by blood, pus, etc. A bright electric light illuminates both ways, and blinds the operator. A practical illustration of this was the brilliant light at Hell Gate in the East River, New York, which became so dangerous to the navigator that it had to be removed as a nuisance. The ideal urethroscope is still an instrument of the future, but it will come. It must avoid the faults mentioned, and particularly, give a good illumination, a clear, bright and direct light to the parts, without a possibility of being eclipsed or in any was disturbed by the touch of the applicator; it must not heat the tube or any part of the instrument, nor blind the operator; the tube must be constructed so that it is easy to introduce and admit instruments for diagnosis and treatment. The best illumination for a urethroscope is electric light, but as many examinations have to be made at the bedside, in places where neither electric nor gas light can be obtained, an instrument is needed, which can be used with another artificial light.

Fenwick[1] deserves much praise for his clear advice on electric illumination, but he dwells more on the cystoscope, says very little about the urethroscope, and since he has written his essays more novelties have appeared in this branch. There are so many contributors in literature on this subject that no place can be given to enumerate the authors and their work.

By practise the expert may acquire a tactile dexterity through transmissions of a bougie a boule in order to make a diagnosis; but an ocular inspection is still better and confirms the diagnosis. The practical value however of the endoscope is to make application to *diseased* tissues *only*, to watch the progress of the medication, to observe the changes for better or worse, and in due time to see and demonstrate that the patient is cured beyond any doubt. Such appearances as proofs of the above were attached to the paper published by the writer 27 years ago. They were drawn from nature, as seen through the endoscope.

For local applications in these parts many different substances both solid and solutions, have been employed. Among them may be mentioned nitrate of silver, iodine and its compounds, the different salts of zinc, iron, tannate of glycerine, etc. At the present time new remedies are employed which cure and at the same time act as germicides. Of these pre-eminently to the front has come Argonin. It is a white powder, a new silver proteid, or albuminate of silver formed by treating sodiumcasein with silver nitrate and alcohol. It has been used as an injection or through the endoscope as a local application on a cotton pledget, or with brush and also a powder-blower as an insufflation. Even as a strong solution it does not cause pain, inconvenience or inflammation, neither does it discolor the linen or the skin. In solution it has been used from a five per cent. solution to a saturated solution or as others have applied it, from ten to fifty grains to the ounce of water. A ten per cent. solution appears to be the favorite as a general rule, but operations may begin in some cases with a two per cent. solution, gradually increasing. The article is sold by Victor Koechl & Co. in New York, who give the following advice to make a solution:

In dissolving argonin in water the following precautions should be observed: Small quantities are to be introduced into a beaker, large quantities into a porcelain dish and treated with the required amount of cold water until all the particles become moistened. Thereupon the beaker or the dish should be heated with stirring, until complete solution results. Only a few minutes are required. Any undissolved particles are now removed by pouring the fluid through gauze, and the solution is kept in dark bottles. Ten per cent. solutions can thus readily be prepared. Argonin solutions should always be freshly prepared.

The following process is given by F. Miehle[1] for making solutions of argonin readily and rapidly: Ten parts of cold water are first introduced into a flask and then one part of argonin. The whole is then vigorously shaken until a uniform mixture is produced, when sufficient boiling water to make up the desired quantity of solution is added, the whole being frequently shaken until complete solution occurs, when the mixture is strained through a piece of gauze. Favorable reports have been made of its successful use from different sources, particularly from physicians in Buffalo. The writer has used it in different ways, but more intelligently as a local application through the endoscope to the deep urethra in different strengths, and sometimes the powder as an insufflation. Argonin is a good germicide, and in a very short time will destroy the gonococcus.

1The Electric Illumination of the Bladder and Urethra by E. H. Fenwick.

1Pharm. Ztg. XL, II. p. 817.

Just as good results, and even better in some cases, have been achieved with *protargol*, which is another new remedy, a proteid synthetical silver compound. It is a substitute for nitrate of silver, possessing its good actions without its objectionable features. The Standard Chemical Co., has made a very good preparation, one per cent. of protargol in their soluble gelatine bougies.

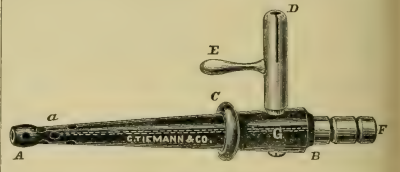
Irrigations are very important. If used in the early stages of inflammations they may abort the disease and prevent the infection of the deep urethra. Local applications are more effective, if the parts are well cleansed, which may be done by a pledget, but best by irrigations. Janet states that in five years experience he had not a single case of stricture when irrigations were begun early. The deep urethra, including the prostatic part, when infected may be so sensitive that an instrument is painful and cannot be tolerated. In such cases it is necessary to irrigate without introducing a catheter or any other instrument. The writer has succeeded in doing this with his syphon arrangement, which he considers the best means for the purpose. He has done this for many years, made up the appliance on fundamental principles without claiming any originality or priority.

It consists of a long rubber tube, one end inside of a U shaped hard rubber tube; it is placed in a glass cylindrical tube which must be elevated—the higher, the greater is the force of flow—which is filled with the water or other solution for irrigation. The other end of the soft rubber tube has a short hard rubber nozzle with a faucet. In the middle is a soft rubber ball, which by pressure removes all air in the tube, and then fills itself by the suction of the syphon with the fluid. The nozzle is then introduced into the meatus, the stopcock turned on and the fluid finds its way into the deep urethra or even into the bladder.

Suppose a tortuous urethral canal or a spasmodic action should prevent the fluid from running deep enough, the flow can be forced by compressing the tube above the ball, and pressing the ball with the other hand, after which the syphon is restored and any quantity of fluid can be coaxed in this way into the bladder. Irrigations may be made with simple water or medicated solutions, having different actions, including antiseptics.

Hydro-Galvanism has also been used by the writer in a similar way as the simple irrigations. The syphon tube is attached to his "Urethral Hydro-Galvanic Instrument," instead of to the rubber nozzle. figure 2, which is introduced into the meatus and attached to the negative pole of a galvanic battery. The positive pole as a pad is placed in the lumbar region. A stopcock regulates the supply of the fluid. The tube is lined with a platinum wire for conduc-

FIG. 2. Urethral Hydro-Galvanic Instrument.



A. to B. A conical hard rubber tube.
A. Small holes for the passage of the fluid into the urethra.
C. Movable soft rubber ring.
D. For the attachment of one cord of the battery.
E. Stopcock.
B. to F. Corrogated metal tube for the attachment of the rubber tube for the introduction of the fluid.
G. Platinum wire lining the hard rubber tube for the conduction of the electricity.

tion of the electricity. The instrument and its use is more fully described in the Transactions of the American Electro-Therapeutic Association for 1895. A current of five milliamperes is generally sufficient for our purpose, and stronger currents are apt to over-stimulate and even cause inflammations. Success depends on sound judgment, careful manipulations, and perfect understanding of the laws of electricity.

Electrolysis may be used to the affected parts. An electrode, either a sound insulated, except two inches at the end, or a Newman's electrode, with an egg-shaped bulb at the end, is introduced into the affected part as a negative pole. An electrode pad, as the positive pole, is placed in the patient's hand and a galvanic current of five milliamperes given from five to ten minutes. If such an application is painful the current must be used weaker and the time shortened. Any pain or hurt must be avoided. The galvano-cautery sound† sometimes has been used and only light flashes made, more as a rubefacient. Any cautery or destruction of tissues must be prevented.

In conclusion, this paper has been written:

1. To protest against the injection of the deep urethra with strong solutions of nitrate of silver as a very dangerous measure.

2. To invite the use of local applications to the parts affected only.

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†Galvano-Cautery Sound and its Application, especially in Hypertrophical Prostate; by Robert Newman, M. D., Transactions International Med. Congress, 1887, and New England Monthly December, 1887.

"Typho-Malarial" Fever

It is now satisfactorily determined that double infection with the typhoid bacillus and the malarial plasmodium is possible. The great majority of cases, however, of so-called "**Typho-Malarial" Fever** are not of this class, but result from infection by the æstivo-autumnal malarial parasite, which produces symptoms closely approximating those of typhoid fever.

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3. To bring attention to Argonin as a preferable agent for local application.

4. To present other different methods of treatment of the deep urethra.

5. To show the importance of the use of the Endoscope.

6. To call attention to irrigations and the syphon instrument.

7. To mention the electric treatment of hydro-galvanism, electrolysis and galvano-cautery sound.

New York, 64 West 36th. St.

Symptoms of Gall-Stones in Children.

A. V. Wendell (Medical Record) says: While the literature of cholelithiasis in adults is abundant, little attention has been given to the study of this affection in infancy and childhood, probably because of the erroneous impression that it is extremely rare in children. Its symptomatology should be studied under the following captions: (1) Cholelithiasis with intermittent obstruction of the biliary passages; (2) cholelithiasis with hydrops of the gall bladder; (3) cholecystitis, but without active symptoms of obstruction; (4) cholelithiasis with perforation of the gall bladder and extravasation into the peritoneal cavity and peritonitis; (5) cholelithiasis with lodgment of calculi in the common duct. There aae three prominent symptoms upon which the diagnosis is often based, namely, pain, vomiting and convulsions. Pain is usually referred to the epigastrium, and is indicated in children by paroxysms of crying attended with severe vomiting. One of the most valuable diagnostic signs is persistence of the sensitiveness of the gall bladder after cessation of the symptoms of the colic. The best means of eliciting this symptom, often the only reliable one, is by placing the child in a warm bath, which will serve to distract its attention and at the same time relax the muscular structures. The Rentini symptom, namely pain around the xiphoid cartilage from gall stones during their expulsion, is deserving of particular attention, as, if extended observation should prove its reliability as a sign of obstruction of the cystic duct, one of the most perplexing questions in the surgical diagnosis of cholelithiasis will be rendered more easy of solution. Vomiting is usually persistent, interrupted only by crying and by exhaustion when the attack is of long duration, its cessation being usually concomitant with the extrusion of the concretion into the bowel. Fever, chills, costal respiratory movements of a jerky character when the patient is placed in a sitting posture, are some of the other symptoms that aid in establishing the diagnosis. As to the existence of jaundice, Wendel's observations agree with those of Waring, that in young persons jaundice caused by gall-stones without pain is rare. In doubtful cases the urine should be evaporated on a water bath to about one-tenth its original volume, and tested for biliary coloring matter and biliary salts. Alcoholic fæces in children are not necessarily white; frequently they present a greenish color, with putrid odor and diarrhœal tendencies.

Antitoxin Treatment of Pneumonia.

A. H. Smith (American Journal of the Medical Sciences, October 1898,) believes that it is probable that the infection is not maintained through its whole course by the same microbes, but by a constant succession of fresh ones, the local process ceasing to extend when the supply of microbes terminates. Yet the production of an antitoxin would also appear to play a part in bringing about the crisis. Some ten years ago Netter rendered mice and rabbits immune against the pneumonic infection by injecting the fluid obtained from the dried spleen of infected animals. Later he employed with the same result pleuritic exudation containing pneumo-cocci and also pneumonic sputum. For immunised animals by means of an attenuated culture of the diplococcus. The Klemperer brothers rendered rabbits immune against this infection and cured dogs by using the serum of immunised animals. Man, unlike animals, is only slightly susceptible to the pneumococcus infection. The Klemperers injected themselves with the pneumo-coccus, and found that in small quantity no effect was produced, and with larger quantities only a local swelling appeared with passing febrile symptoms. The disease is grave in man, owing to the absorption of poisons from the local lesion. The immunity against the pneumo-coccus is only short-lived. Lara obtained encouraging results in treating ten cases of pneumonia with serum. Bozzolo also treated five cases with one death. De-Renzi used the serum in ten severe cases, and all recovered. Wiesbecker treated five cases with serum obtained from convalescents, and always noted a remarkable improvement in the subjective symptoms. Washburn used in his cases serum from an immunised pony, devising a special method of cultivation so that the microbes maintained their virulence for sixty-six days. Several cases have been treated with Washburn's serum, with favorable results.

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PSYCHOLOGY AND MEDICINE.

The study of double personalities, of abnormal mental states, hypnotism and somnambulism, and psychic phenomena generally, have, until the last decade, been confined to the psychologist or metaphysician. There is a vast change in the attitude toward psychic phenomena as understood today. The reason is not difficult to explain. A clearer understanding of the self, a greater increase of knowledge, and the pregnant fact that the psychic and somatic phenomena and life are not to be separated by any line, but are correlated factors of the self.

Many of the provisional hypotheses put forward by the philosophers to explain the phenomena of double consciousness and multiple personalities, make the result of physiology involve subjective data. This attitude and method of reasoning only raises perplexing metaphysical questions as to the substantive or dynamic nature of mind. Such purely metaphysical hypotheses must be very carefully differentiated from what we can with fairness accept as postulates pertaining to the departments of psychology and physiology. As Hyslop aptly says: In the study of medicine there is a preponderance of the somatic element, and little or no regard is paid to the psychic element. According to Hartmann, the reason of this neglect is to be found in the fact that philosophers by profession are not necessarily physiologists, and, on the other hand, that physiologists are seldom enough philosophers to handle their subject successfully. However, I believe that the physiologists are more inclined to-day to rational philosophic reasoning than are philosophers to physiologic investigation.

The medical man and the philosopher have now met on common ground as regards the purely physical basis of all unexplainable mental and psychic phenomena. They both admit that it is some physical state which causes the interesting conditions seen in varying personalities; but as we have no certain knowledge as to the manner in which physical states cause certain mental states, so we are absolutely without any knowledge as to the methods by which morbid physical factors give rise to morbid psychic events.

Whichever way we look at the subject a thoroughgoing materialistic formula must provide a material accompaniment for every apparent activity of the mind. In other words, before we can reach any rational and scientific method of provisional reasoning we must set aside the idea that the real self is an immaterial, invisible, mysterious, unfathomable something, which the metaphysicians call mind, and another class of non-investigators call soul.

IS CIVILIZATION DESTRUCTIVE?

The recent death of Thomas F. Bayard, of Delaware, whereby another illustrious family has become extinct, suggests a renewed inquiry as to why the names most distinguished among men should so often tend to disappear. Is there something fateful attending the development of the anterior brain? Is it like the spark whose gleam is brightest before it expires? Is it that the possession of great intellectual endowments betokens the ripened fruit—the culmination of long physiologic processes brought thus to an appropriate end? We do not believe it.

Certain it is, however, that celebrated names are seldom perpetuated. Or if a posterity remains, it is more frequently traced through collateral lines. Some families there are whose founder came over, perhaps, a generation after the Mayflower, that have originated an extensive lineage. Their genealogical records require scores of pages for the enrollment of their members. While it may be true that the native population of colonial times, as a whole, has ceased to increase, as statistics show, yet there are conspicuous examples of certain families who have multiplied and are continuing to multiply "as the sands of the sea." It was Hawthorne, speaking of a colonial assemblage, who observed: "Morally, as well as materially, there was a coarser fibre in those wives and maidens of old English birth and breeding, than in their fair descendants, separated from them by a series of six or seven generations; for, throughout that chain of ancestry, every successive mother has transmitted to her child a fainter bloom, a more delicate and briefer beauty, and a slighter physical frame, if not a character of less force and solidity than her own." This would imply

that an advancing civilization is necessarily destructive. Again, we do not believe it.

How then shall the tendency to extinction of certain lines be explained? Plainly by the failure to observe the certain biologic laws of selection. Here is a wide and fertile field for future cultivation. Although the most momentous consequences to humanity hinge on a knowledge and an observance of conditions not only ante-natal but ante-nuptial as well, yet science has not blazed a pathway as yet into this vital domain. Subjects of this nature are in the main tabooed, and ignorance is popularly esteemed more highly than knowledge. Is this not the reverse of civilization? What shall be said of a culture which ignores the problems of longevity, and nourishes the brightest examples of humanity into extinction?

One after another the great civilizations of antiquity went down in the East, through the moral and physical—always the physical—degeneracy of the people. Is it not time that our own medical, scientific and sociological societies should give thought to this matter, and make prominent the knowledge of those laws of selection, heredity and life without which all that is fairest and most promising in our own civilization may likewise perish.

THE CONTAGIOUSNESS OF HUMAN TUBERCULOSIS.

It is evident that the word contagion, as applied to tubercular infection, has a very different signification from its ordinary use in connection with the so-called zymotic diseases. The contagion of small-pox, scarlatina, &c., has come to be a well understood, definite phenomenon. Its effects are in a manner prompt, decisive, visible and often traceable to the source of infection. The expediency of isolation in these cases is too self-evident to be called in question.

But contagion as applied to tubercular disease is quite another matter. According to the latest authorities, if we may believe the revelations of the microscope and the tests with tuberculin, fully two-thirds of the human race are tubercular. In one-half of these, that is in one-third of mankind, the disease is latent. They have tuberculosis, but neither they nor their friends nor any one else suspect it, until perchance it is revealed at the autopsy. Now in popular estimation, tubercular disease is a very serious, and in the great majority of cases, a very deadly thing. And to be told that one-third of the human race may "catch" it, bear it about with them the rest of their lives without knowing it, and perhaps die of something else, is certainly exhibiting the disease in an entirely new light. If contagion reproduces small-pox with all its virulent concomitants promptly and certainly, it is manifestly a misuse of words to use the same term with reference to a disease whose manifestations are half of the time wholly unknown.

The communicability of the tubercle bacillus is not here denied. The point insisted on is that if one-third of mankind is infected without knowing it, the disease is certainly not *contagious* in the sense that this word is ordinarily understood. Moreover, the bacillus may exist in circumscribed localities—as in the cervical glands—without causing pulmonary or other infection. That is, the contagium may be received and multiply within the body in certain areas, and not migrate to other regions where its presence is a menace to life. This is so well known that some of the best among the great Life Insurance Companies will accept risks, in spite of a history of suppurating cervical glands in the applicant, extending over variable periods of time.

If the bacillus, therefore, can remain "latent" in one-third of the human species, and be harbored and multiply in its favorite nidus among the cervical glands without necessarily infecting the remainder of the organism, is it likely that the supposed danger of infection *de novo* from floating germs in the habitations of the tubercular, is as imminent as has been represented? In those States where "all contagious diseases" are required by statute law to be quarantined, does any one suppose that tuberculosis is meant to be included? If not, then some word other than "contagious" should be invented, if need be, and employed to designate the low degree of tubercular communicability.

A COUNTRY FOR HEREDITARY INVALIDS.

We have what is known west of the Mississippi the southwest country, it lies between the parallels 34 degrees and 38 degrees, north latitude, and west and southwest of the Flint Hills or Highlands of eastern Kansas, to the foot hills of the range of mountains of Colorado and New Mexico; the basin of the great American Desert. While this is considered a basin, its altitude is considerably above that of Missouri, Illinois, Indiana, and the eastern and middle States; therefore the atmosphere is more rare than the country surrounding and adjacent to it.

This country in its western and central parts is interspersed with numerous salt

basins and plains, which are covered during the dry part of the summer months with a crust of salt from one-fourth to one and a half inches thick. Many of the streams are so salty during the dry part of the season that man nor beast cannot drink the water. During nine months of the year there is a strong southwest breeze, which is often moist and laden with saline matter by evaporation from those salt deposits, which is enervating and invigorating to a person that comes from a climate where the atmosphere is humid and heavy. It is vitalizing to the blood and to those persons who have a strumous or scrofulous diathesis, or who hereditarily have a tendency to pulmonary or rheumatic diseases, that wish to find a country where they can escape the virulence and malignancy of those affections, (which is the dread of the human family,) this is the country for them to seek, if they will go in the incipient stage, while they have the balance of vitality on the side of life. During the summer months of July, August and September, it is extremely hot during the day, for from thirty to sixty days the mercury rising to 100 to 110 deg. by midday, but will fall to about 70 deg. by midnight, which produces such blood changes that often cause in the fall an epidemic of such diseases as typhoid fever, diphtheria, scarlatina, &c., but they are not of so malignant and putrescent type as we find them further east and south.

WHAT THE DEGREE OF M. D. SIGNIFIES.

A certain physician that we know of, a graduate of a reputable medical college, in the course of a consultation with another practitioner, remarked that the patient under consideration did not have disease of the kidneys, because—holding up to the light a bottle containing some urine recently voided—there were no tubes casts visible. The college that licensed him boasts of its high standards for admission, its select body of students, its searching examinations, and its rigid requirements for graduation. Yet a man who could, by no possibility, obtain a license to teach a country school, and who thought tube casts could be seen floating about in the urine like wigglers in an old barrel of rain water, is a thorough-bred medical doctor, according to the great seal and the latin imprimatur of a high grade medical college. This is not a solitary example. The land teems with hundreds of similar instances.

On the other hand, a highly educated and competent physician, located perhaps on the same street, is also simply an M. D. He may have spent years of time and thousands of dollars in money to qualify himself for his high calling—to keep abreast of the rapidly widening field of medical science. But like the other man he is a plain M. D. No sign tells of his college, his years of study, his equipment. The code to which, as a gentleman, he instinctively subscribes, or thinks he must subscribe, forbids that he should flaunt the insignia of special aptitude or skill. So far as the laity may know, the two stand on the same plane of professional preparation and usefulness. The laity do not attend medical societies, read medical journals, nor, perhaps, enjoy the personal acquaintance of either of the men. How then can they discriminate intelligently between them? Especially if the former is a boaster, a solicitor, an adept in the various arts of quackery, how can the people judge, when the very points at issue demand special knowledge for their appreciation?

Evidently there must come a re-alignment of the differing elements—differing and continuing to differ as they never did before—in this absurd situation. Not from the enactment of State laws will the change come. When well known officials make distant journies to consult a "mind cure" woman, and the Legislature of a great State like Illinois recognizes and sanctions such voodooism as "Osteopathy," it is idle to expect that legislation will correct the inequalities indicated. Only the medical profession itself can purge itself of these abuses by adopting and *guarding* certain standards and by educating the public to their recognition. And these standards and their insignia should be something above and beyond the present all-comprehensive M. D.

IMPORTANCE OF EARLY RECOGNITION OF ACUTE STRANGULATED HERNIA.

The foregoing topic will remain pertinent until the last man can say: "I never attended a case of strangulated hernia, unrecognized as such, until too late in the disease, for relief to be given."

The classical symptoms: constipation, flatulent eructations, colicky pains, referred usually to the region round the umbilicus, vomiting, at first of chylous digesta, then of bile, and finally of fecal matter, together with abdominal distention, are many of them so common to other affections, as to mislead the physician, unless he is on the alert.

At times the only symptoms at the beginning will be a moderate projectile vomiting, at infrequent intervals, particularly if the strangulation be slow.

In every case of acute abdominal trouble, one should never fail, to examine carefully

the femoral and inguinal regions for this possible difficulty.

It is possible to be misled by the statements of the patient. A lump in the femoral or inguinal region, which the patient insists has been there for years, should be differentiated from an enlarged lymphatic gland, remembering that a lump formed by an old adherent pouch of omentum may have existed thus long, and a loop of the gut recently dropped down into it and become strangulated. This is not uncommon in the adult.

Hernia in children frequently becomes strangulated. Strict search should always be made in children likewise, for this condition, in every case presenting the slightest symptoms.

To overlook an external strangulated hernia in any instance, is to expose one's self not only to the severest censure of relatives and friends, but also, to cause one who is in any wise conscientious, to feel that a human life has been needlessly sacrificed.

THE NINETEENTH CENTURY IN MEDICINE.

The nineteenth century now drawing to a close has been marked by advances in nearly every science and industry, which surpass those of any of its predecessors. It has witnessed the development of the steam engine and the printing press; invented intricate machinery and performed magnificent feats of engineering skill which command the admiration of the world. It has also successfully harnessed the forces of electricity and made them subservient to man's desires in conveying messages, dispelling darkness and supplying power. But the science of medicine has profited more than all others by the discoveries of the last hundred years, and many important facts have been added to our knowledge, which increase not only the comforts but the longevity of life as well. The whole broad field of gynæcology and abdominal surgery, the art of physical exploration of the chest, the adaptation of the microscope to diagnosis and the discovery of bacterial life represent some of the results of the untiring energy of the medical profession.

The objective for which the physician strives is the relief of suffering and the preservation of life, rather than his own financial gain. And so successful has he been that human life and health were never so well protected as now, despite the follies and gross errors of a heedless people. Moreover, the patient and industrious guardian of health today is much more skillful in the application of his knowledge and increased facilities than were any of his ancestors. Thus we find that much of the expert skill and knowledge of only a few years ago are now demanded of and constitute the ordinary qualifications of the physician of to-day without which he is considered lamentably ignorant.

In business enterprises and in the trades the law of survival of the fittest seems to be universal. Competition has produced improved machinery to lessen the cost of production and this requires increased capital. Likewise, in the professions capital is the foundation of success and, other things being equal, the greater the amount of capital invested the greater will be the returns. The person who expects to succeed in one of the learned professions in the future must put more time and money into his education and equipment than formerly, for competition and legislation are relentlessly weeding out the incompetents. In medicine this is especially true. The time is past when a young man can "read medicine" for a few months in a doctor's office or "take" a course or two of lectures and then begin his practice; now he has to *study* long and diligently and supplement his study by clinical observation before the State will allow him a license.

In one important respect medicine differs from the trades. The merchant or the manufacturer may increase his capital without sacrificing what he already has invested. But so rapid is the progress in medicine that the doctor's capital invested in his profession becomes nearly worthless in a few years and has to be largely replaced. His library becomes antiquated in five years and almost worthless in ten; his instruments are soon superseded by better ones; his drugs followed by more efficient or elegant preparations and even his mental stock (of which it has been said no one can rob him) becomes seriously impaired unless he takes pains to keep himself in touch with the progress of the times by constant study. And within a few more years we may expect to find that a degree in science or arts will be a pre-requisite to the study of medicine; and already the man whose mind is drilled and expanded by such thorough preliminary work has a great advantage over him who is not so fortunate.

But how about the returns for this increased expenditure and more efficient service which the physician of the present gives? Is it not the broker, the merchant, the producer, and the manufacturer who own the money of this country? Or at least was it not accumulated through one of these means? Professional men as a rule make a comfortable income but beyond their living

rarely save any great amount. The estate of the physician, if we except his life insurance policies, usually consists of a large number of book accounts of doubtful value, and a few outlawed notes. His home and his office are often rented, or encumbered by a mortgage. His library and office fixtures are unsalable except at a great sacrifice. If he has other property of any amount it was obtained through other means than his profession, or he has been unusually fortunate in his business methods. This should not be so but the physician, by insisting upon adequate compensation for the increased requirements demanded of him should accumulate a fortune befitting his mental and social station. This we confidently look to the twentieth century to bring about.

PROF. KOCH'S VIEWS ON MALARIAL FEVER.

Considerable interest has been aroused lately by the announcement of recent views of Dr. Robt. Koch, of Berlin, in regard to the role the mosquito plays in the spread of malarial fever.

Dr. Koch has recently returned from East Africa, where he was sent by the German government to investigate "Rind-pest" or "Texas fever" in cattle, as we term it here.

He does not think this disease to have been imported from America, as it has existed there for a long time, at least 100 years. He confirmed some of Prof. Smith's experiments, in which infection was traced to a parasite, the intra-cellular pirosoma bigeminum, and its host, a parasite of the tick family that infests cattle. He thought there was in its etiology certain probable analogies with malaria. He raised several generations of these ticks and placed them on healthy cattle in a part of the country where Texas fever was unknown, which produced the disease in 22 days. He found the forms of malaria occurring in a tropical country to differ, as a rule, from the ordinary malaria, in which the ordinary type occurred in only 10 per cent. of the cases. The quotidian and tertian forms do occur in about the proportion mentioned, but besides these there are two other forms distinctly tropical.

At the height of the paroxysm in tropical fever, there is a persistence of the highest febrile temperature for some 36 hours, in marked distinction to the almost immediate fall of the temperature, after it has reached its acme, as is always seen in America and Europe. He found some marked difference also in form and size of the plasmodium in these cases. The mosquito he thinks is the agency by which malaria is spread. He found it to exist only where mosquitoes are present, and found an island off the German East African coast where both the disease and mosquito were absent. He also found mosquito nets to afford effectual protection against the disease when wandering over infected territory. He cites also for analogy the cachexia, fatal to most animals, and often extremely severe in human beings, that follows the bite of the Tsetze fly, as probably due to the inoculation of some organic infectious material, capable of reproduction in the organism, rather than to the injection of simple toxic substances.

He thinks quinine effective, prophylacticly and curatively, but believes too much is used there, which he thinks is the cause of the dreaded *Schwartzwasser fieber* (black water fever), or malarial hematuria as we term it. He believes one can gradually become immune to malaria, and hopes that a practical method of immunization, perhaps by serum therapy, will be developed.

It is now said that he intends shortly to return to Africa for the purpose of experimenting with the intra-venous injection of quinine, thus bringing the remedy in direct contact with the parasite without any circuitous route. The plan is certainly novel and results will be watched with interest by us all.

THE WAR AGAINST THE MILITARY SURGEONS.

We notice a great deal of talk, lately, in the secular papers detrimental to the standing and capacity of the medical men who served, and are still serving, in the military hospitals connected with the late war with Spain.

Even our greatest man, Surgeon General Sternberg, whose well known reputation needs no defense, does not escape criticism.

According to these critics, a great part of the sickness, and many deaths, were due to the incompetency and carelessness of the surgeons.

If we take a proper view of the whole matter, we must conclude that the main fault lies with the action of our public authorities in declaring war at the time of year it was commenced—knowing our troops would be exposed to the deathly influences of a tropical climate at the most sickly season of the year.

The war was declared before the government had time to get properly ready for it. Large numbers of troops were hurriedly crowded into camps before sufficient time was allowed to observe proper hygienic precautions.

Under the circumstances, nothing but a

great deal of sickness should have been expected among 40 or 50 thousand men gathered from healthy districts of country and crowded into one camp, as at Fort Thomas. In the outset there was a scarcity of doctors and nurses, and no doubt many patients did not receive timely attention, but this was not the fault of the surgeons present in their over-tasked condition, but to deficiency in number of attendants. Therefore we must not charge the blame to the doctors, but to higher authorities for hurrying matters before they were ready.

We cannot but express regret, as well, to some extent resentment, that a body of men who did every thing they could to relieve suffering and save life, besides exposing themselves to fatal causes of disease, should not only receive no thanks, but be villified as careless incompetents. In fact, several have already lost their lives.

INSANITY AS A DEFENCE FOR CRIME.

In recent years the plea of insanity as a defence for crime has been advanced with increasing frequency and now forms the sole defence in about 15 per cent. of all criminal cases. This has become so common of late years that juries and society are inclined to regard it with little favor but consider it rather as a scheme resorted to by the crafty lawyer in all desperate cases. Yet I am firmly of the belief that this defence is seldom advanced in cases where there is absolutely no justice or excuse for it—in other words I do not believe simulation of mental disease is common. The penal code provides that a person is excused from criminal responsibility upon proof that at the time he committed the alleged criminal act he was laboring under such a defect of reason, as a result of disease as not to know what he was doing, or not to know it was wrong. What more natural then or proper in cases of crime where mental disease is suspected, than an inquiry as to the mental condition of the prisoner and if the mind is at fault to what degree is it impaired. The jury constitutes the commission in lunacy to determine this question before all others; after which, if the prisoner be adjudged sane, it has to decide his guilt or innocence. If the counsel abandoned his client without making an effort to have his mental responsibility determined judicially he would be morally guilty of malpractice for neglect of duty. But he might choose to make some other defence at first if the circumstances of the case seemed to warrant it and leave the "insanity dodge" as it is often called for a final effort.

The idea of insanity, as entertained by the masses is erroneous and partakes more of superstitious belief of the middle ages than of scientific medicine. As late as the seventeenth century every morbid act or irrational utterance was attributed to witchcraft; and now many cases of undoubted insanity are explained by the people and even by many intelligent persons as due to "deviltry" or a "criminal propensity." Herein the physician, from his enlightened understanding, may plead the cause of charity and he should use every effort to educate the people that there are many forms of insanity differing widely in their outward or superficial manifestations and that it may attack the lowest creature of civilization as well as the highest. Certain forms of insanity, which are so plain that anyone can recognize them are perfectly harmless, while others which may require close scrutiny to detect are known to predispose to theft, to arson, to rape, or to homicide. These last are the ones which shock the community by the atrociousness of their deeds and later become the cause of so much contention and ill feeling in establishing their irresponsibility.

In physical diseases the public concedes to the trained physician superior knowledge in diagnosis and generally accepts his opinion without question. But in insanity every man jumps at a conclusion, and the carefully studied out opinion of the physician is quickly turned down if it happens to be at variance to his own preconceived notions. As an extreme example of this I will mention a recent case upon which the writer was engaged as a witness for the defence. In this case the district attorney attempted to prove the prisoner of sound mind by non-medical witnesses alone and insulted the intelligence of the jury as well as the four experts who were sworn, by saying that the neighbors of the prisoner were better judges of his mental condition than the specialists. This theory might seem plausible to a few but it would be placing a premium upon ignorance and contrary to the progress of the age. And it is very doubtful if any of those would-be experts would have recognized any insanity in a subacute stage unless active mania or marked hallucinations were present.

Many lunatics do not show their unsoundness of mind except at certain times or under certain circumstances, and most of them are not devoid of all reason but are able to talk intelligently and rationally on many subjects. Some even are eloquent in speech or shrewd in business and show no outward indication of their true condition, but at home or to their physician are known as the

"skeleton in the closet." Yet the public seems to think that a person to be insane must be a raving maniac under all circumstances and at all times. And they are often unwilling to excuse a lunatic from punishment for his acts, on account of the heinousness of his crime, holding that even if insane he should suffer punishment as an example to others. But if one of their own family should commit the same act during the delirium of pneumonia or other disease their feelings about "public policy" might be changed. Such, then, are some of the fallacies under which the public is laboring in regard to insanity as it applies to the criminal.

TUBAL PREGNANCY.

In an interesting article on some of the aspects of extra-uterine gestation Prof. Fehling, of Halle, adds much to our understanding of the subject, (foot-note: H. Fehling, in Zeitschrift fuer Geburtshuefe und Gynaekologie, Band xxxviii, Heft. 1.) More cases are recorded in recent years because they are now better diagnosticated or because there is more gonorrhea now than formerly. Tubal pregnancy occurs oftener in cities than in small towns, in primiparæ than in multiparæ and among the laboring people than the well-to-do. To meet a case of unruptured or unaborted tubal pregnancy is rare, for one of these conditions is the usual cause of the symptoms causing the patient to seek relief.

The distinction between tubal rupture and tubal abortion is not sufficiently recognized and therefore much uncertainty exists in regard to the diagnosis, prognosis and best methods of treatment. According to Fehling's series of cases abortion was eight times as frequent as tubal rupture. It is worth noting in passing that disease of the ovary and tube of the opposite side occurs in about three-fourths of the cases of tubal pregnancy. Rupture allows the ovum to escape into the abdominal cavity where it may take root upon some other viscus and go on to further development unless the copious hæmorrhage either kills the woman or necessitates operative interference. Tubal abortion is associated with hæmorrhage between the ovum and the embryonic envelops, usually with escape of blood into the uterus and into the peritoneal cavity, with the formation of a pelvic hæmatocele. In complete abortion the ovum itself leaves the tube through one of its natural openings but far more often the abortion is incomplete. In the latter event the ovum gives rise to irritation as a foreign body, becomes absorbed if small enough or, after losing its watery constituents, remains as the fetus papyraceus. The very frequent occurrence of rupture as the result of physical examination warns us to make our manual investigations with the greatest gentleness.

The principles of pregnancy within a tube are the same as within the uterus. The practical differences lie in the fact that the tubal walls are thin and therefore easily ruptured from the pressure of the growing ovum, in the fact that the blood supply to the tube is insufficient and also in the fact that the mucous membrane of the tube, on account of the very disease which caused the lodgment of the ovum there is inflamed and therefore ill suited to contain the embryo.

Pelvic hæmatocele is present in nearly every tubal abortion in spite of the dictum of Lawson Tait upon this subject. The blood oozes through the fimbriated end of the tube and from the effects of gravity seeks the lowest point of the peritoneal cavity. This point is, in most instances, the retro-uterine space. More than nine out of ten intra-peritoneal hæmorrhages are due to ectopic pregnancy but not all. The small remainder are caused by pyosalphinx with circumscribed peritonitis, tumors of the pelvic organs, rheumatism, &c.

Clinically tubal rupture is to be distinguished from tubal abortion by the following characteristics. The former more often follows some more or less insignificant traumatism, even a gynecological examination. It is ushered in by all the signs of hæmorrhage, fainting, pallor, loss of radial pulse, &c. Such signs, occurring in a woman in whom early pregnancy may be suspected, are very strongly indicative of tubal rupture. When one immediately finds a soft rapidly increasing swelling in the retro-uterine region the diagnosis is reasonably certain. The symptoms of tubal abortion differ considerably in degree. A fatal hæmorrhage is unknown. The signs of bleeding are more slow, often running over several days, often there are frequent small hæmorrhages, frequent attacks of pelvic pains and bearing down sensations. There will be a slight staining of the napkins at irregular intervals, each time preceded by attacks of pains. Examination at this time will reveal a hard and increasing tumor to one side of the uterus and a mass of clotted blood in the retro-uterine fossa or elsewhere in the dependent parts of the pelvis. Curettage of the uterus at an early period will obtain decidual cells showing their characteristics under the microscope and later the changes of a gladiator or interstitial endometritis.

The uterine end of the tube is always

found empty and the blood in the rest of the tube coagulated. The ampullar portion of the tube is more capable of dilating than is that of the isthmus. It is surmised therefore (but further investigations are desirable) that rupture is the rule where the ovum lodges in the isthmic portion and tubal abortion where the ampullar part is the seat of the ectopic embryo. The pains are doubtless due to contractions of the muscular fibres of the tube. Perhaps the occurrence of pregnancy in a Fallopian tube may be something of an atavistic phenomenon. In most of the lower mammals the uterine cavity runs imperceptibly into the oviduct and does not have the marked difference in caliber between uterus and tube which obtains in the woman. In them tubal pregnancy may be said to be a normal event.

Of the two, of course rupture is far more dangerous and demands immediate operative interference. In tubal abortion there is always time for mature consideration of the case and there is room for an expectant plan of treatment. In operative cases of the latter the mortality is only five per cent. The indications for operation are the following: Progressive increase in size of the tumor in the region of the Fallopian tube; signs of continuance of the internal hœmorrhage or appearance of infection of the tubal sack, such as chills, quickened pulse and more than evanescent fever

The abdominal route is preferred for the operation. It is easier to see what is the matter and easier to see what to do from an abdominal incision aided by the Trendelenburg position than through the gloom of the vaginal route. Also the affected adnexa must be removed and in most cases that means on both sides. The vaginal method is only suited to cases where infection of the tubal sack has occurred because this method affords better drainage with less danger of extension of the infection to the general peritoneum.

SOME RESULTS OF THE ERECT POSTURE.

Every vertebrate animal, in the architecture of its body and the arrangement of its vital organs, is adapted for the horizontal position. This is particularly the case with the mammals. Witness in the first place the strength of the spinal column. The fore limbs are in all species the better adapted for prehension or defense, while the hind limbs perform the greater portion of the function of locomotion. In man the extreme development of the cranium and its contents throws the face to a right angle with the axis of the body, inheritance from his arboreal ancestors gives his arms a free movement in many directions, while the excessive development of his legs adapts them especially for locomotion. On the other hand, however, man inherits with the vertebrate form a number of disadvantages. While the form of his chest is just as well fitted to hold his lungs, yet his heart and great vessels do not hang so well from a vertical as they would from a horizontal spine. This condition favors aneurism and valvular deformities. If man went on all fours his heart would have to pump blood only about two and one-half instead of about six feet high to complete the circulation. The consequent increase of hydrostatic pressure is responsible for many vascular disorders, particularly varicosities. One has only to stop to think how great a change comes over the pulse rate on rising from a reclining to an erect position to realize what an effect the sudden change in hydrostatic pressure has upon the heart's labor.

It is in the abdomen that man pays dearest for the privilege of his unique posture. The pelvis becomes the bottom of the abdominal cavity and as such receives the whole weight of its contents. While in animals all the viscera by the various reasens, are supported from the spinal column, in man the vertical position of the latter allows the viscera more or less to hang downwards and press upon the parts below. The only common hernia in lower mammals is the umbilical, and here the weak point is at the lowest part of the abdomen. Uterine displacements and disorders of the pelvic organs of generation are almost unknown among them. Varicocele and hæmorrhoids are extremely rare or unknown and so are varicose veins of the lower limbs. In man there is, as long as he stands or sits, a constant tendency to congestion of the pelvic organs, and this is accentuated by anything which increases the size of those organs. The growing uterus of pregnancy, especially in the primipara, with her unrelaxing abdominal pressure aids the supervention of many of the reflex disturbances such as hyperemesis gravidarum and of puerperal eclampsia. These disorders are unknown in the lower animals.

Every advance in the evolutionary scale is paid for by some disadvantages and the erect posture is no exception to the rule. A valuable hint is given us in the treatment of the disorders which are favored by standing erect. The frequent assumption of the knee-chest position, as well as frequent lying down, even for a short time, is a most valuable and often indispensable adjunct to treatment in all pelvic disorders. I have many a time seen benefit in the obstinate

vomiting of pregnancy from prescribing the knee-chest position for a few minutes each several times a day. I always advise it in all cases after confinement for a period of several weeks and think that I save many a case of prolapse or subinvolution by the means. After almost all operations on the rectum and, indeed, in conjunction with any treatment for hæmorrhoids the knee-chest position is always beneficial.

PELVIC OPERATIONS BY THE VAGINAL ROUTE.

Ten years ago few practiced or had witnessed operations upon diseased female pelvic organs by way of the vagina. Since that time there has developed a school of gynecologists whose followers practice and advocate attacking almost all pelvic operations in that manner. The main impetus was given to this method of procedure by the French, notably Pean. Of late many American surgeons, notably Howard Kelly, have exhibited a strong leaning in this direction. On the other hand this method has been vigorously combatted on this side of the water by an ever increasing number of distinguished gynecologists, in forefront of whom stands Joseph Price. The French and their followers in this country have argued that the vaginal route in almost all operations upon the uterus, tubes, ovaries or pelvic abscesses or tumors is quicker, allows for better drainage causes less shock, leaves less liability of hernia and no unsightly scar. On the other hand they admit that it is impossible to have as good a light, that much of the dissection and manipulations in releasing adhesions and in placing ligatures, &c., is done in the dark by feeling alone. Fistulæ are admitted to occur more often and sometimes it is necessary to abandon the vaginal route and make an incision above the pelvis.

The advocates of the abdominal route claim that that method allows perfect ocular inspection of the field of operation that, aided by the Trendelenburg position, it gives much more freedom to the fingers, that one can be surer that all hæmorrhage has been stopped and that he can be surer that nothing detrimental has been left to be a future source of trouble in the pelvis. With modern methods of suture and with the perfected catgut ligature and suture material, the danger of a hernia in the scar is small and fistulæ are rare in the hands of skillful operators. When we consider the frequency with which an infected appendix with its sequelæ is found in abdominal operations begun for suspected disease of the pelvic organs and the danger of attacking such a thing as that from the vagina we can understand another weighty reason for always going into the peritoneal cavity from above when the diagnosis of the actual condition is not absolutely certain. Wise indeed is he who always knows just what conditions he will find inside a diseased pelvis.

The present controversy will probably result in the vaginal route being reserved for hysteroctomy for malignant disease and for opening abscesses of the tubes, ovaries or other parts of the pelvis which have been forced very low down towards the floor of the pelvis. Acute ovarian abscesses may often be well attacked that way as well as large pyosalpinges and old infected sacks of ectopic pregnancies.

UTILIZING MEDICAL LITERATURE.

How few physicians have any systematic method of preserving in an available form for future use the medical literature which comes to them in the form of medical journals, monographs, transactions of societies, etc.

Most practitioners, especially in the country districts, wishing to look up any special subject, must depend entirely upon a few standard text books which contain only short, formal, and ultra-conservative articles which are filled often with the traditional errors of the past; only in the "original articles" of our best periodicals, or their reprints, can be found the freedom of thought, the individual experience and the original research which marks the progress of modern medicine. Only by overhauling piles of medical journals or reprints, or by looking through many volumes of bound periodicals can the coveted original article sought for, be found. Binding the journals is good, but it is expensive and after a few years our library becomes too ponderous for effective reference. Galloway of Chicago, advises that the articles to be saved be cut from the journals, then folded and placed in large envelopes which are inscribed with the title and arranged on shelves and indexed according to the Dewey decimal system now used by most public libraries. This method however is too intricate for most busy physicians and offers no advantages over the card index plan.

All users of indices know that a book index, after one or more pages are full, becomes worthless and must be replaced by another; the card index however is perpetual, as cards may be added *ad infinitim*, and the number of boxes or drawers increased accordingly. By carefully indexing each week all the articles of importance in the

various journals as well as all the reprints received, one will soon have at his command a most valuable means of reference. The advertising pages can be torn from the periodicals and the latter, thus greatly reduced in size, can be arranged by volumes on shelves especially arranged for the purpose; or the periodicals may be torn to pieces by removing the binding wires and the separate articles as well as all reprints be placed in the envelopes, the latter numbered and arranged on shelves or in boxes, and indexed by the card catalogue.

The card index may be obtained from the Library Bureau of Boston which has branch houses in all the large cities.

DO AMERICANS EAT TOO MUCH?

Some foreigner has said of Americans that "they have a breakfast for a gladiator, a luncheon for a bull-dog, and a dinner for a digestive apparatus run by electricity."

Although not a nation of drinkers, it is probable that there is as much intemperance in eating in America as in any other nation in the world. The average business and professional man eats much more than his system demands, and with his limited physical exercise, much more than his organs can properly eliminate. When we treat such individuals, our greatest difficulty is in the regulation of their diet; they enjoy eating; in fact they would rather, as a wit has said, "die eating than di-et." This excess in eating applies especially to meat, which, on most American tables, is found at three meals; only a laboring man should eat meat more than once a day; the business man with sedentary habits may still have a good appetite and eat habitually a superabundance of all food, especially meat; the surplus of nutrient material unused is stored up in some form; after a time, as the capacity for storage is limited and varies greatly in different persons, an undesirable balance remains against the feeder, and is usually rectified by a "bilious attack," through the agency of which, a few hours of vomiting and misery square the account.

Sir Henry Thompson has said that "more than half of the disease which embitters the middle and latter part of life among the middle and upper classes of the population is due to avoidable errors in diet." Excess in the use of nitrogenous food is the greatest cause of these diseases; the most difficult work required of the eliminative organs is in getting rid of this excess of proteid foods.

The habitual loss of balance between the "income" and the "output" results eventually in the storing up of fat on the external surfaces of the body, or packed among the internal organs, interfering with their functions; or in other individuals causes degenerative changes in the liver, kidneys or blood-vessels, producing that deadly arterio-schlerosis which is the fore-runner of premature death.

Haig, in his work on "Uric Acid and Disease," has taught us that the most perfect health, together with the most active physical and mental life, can be had upon a diet which excludes all butcher's meat and consists only of milk and food derived from the vegetable kingdom with an occasional dish of fish. By such a diet he claims that life can be prolonged and such diseases as rheumatism, gout, and Brights Disease prevented.

HYGIENE OF THE BARBER SHOP.

A noted French critic, writing of American customs says: "The correct and well dressed young men, many of them, are shaved each day by a public barber. You may see rows of small porcelain cups with the names of their owners upon them. These young gentlemen come in, take off their collars and neck-cloths, and then their faces are daubed with soap and rubbed by the hands of the barber and shaved. They are then wiped off with a towel, powdered, and without any further ablution on their part, they go thence to make love, or to kiss their wives and their children, for all I know. This seems to me horribly dirty and painfully disagreeable."

The above is a non-professional opinion of the American barber shop and considers mainly the æsthetic features of that institution. If looked at from a professional standpoint, the objections will carry even more weight and will relate largely to the transmission of disease.

The writer recently, when taking his seat in a barber's chair, observed two of his patients in adjoining chairs; one of these patients was then under treatment for a papular syphilide, and the other was just recovering from a tinea sycosis. The horror of the situation was intensified when our barber took from his pocket a stick of alum and was about to use it to staunch the slight bleeding of an abrasion, had not a decided protest prevented his doing so.

Can a barber shop be made aseptic? Such places, so-called, exist in Paris and in some cities of the United States, but as yet are not very popular; their greatest enemy is the barber himself; he cannot be made to understand the principles of asepsis and antisepsis; a book written upon the subject for the barber is needed, which gives in

simple language the principles of asepsis, and the manner in which the various diseases are transmitted.

In an aseptic barber shop many of the old time utensils will be discarded; the mug, the brush and the cake of soap must be thrown away; in their place will be used a soft soap from a compressible tube, rubbed on the face with moistened aseptic fingers; the wire brush will be used, and, with the metallic comb, the scissors, and the razor must be taken from boiling water just before using; the towel will be a sterilized towel, and the puff box or magnesia cake will be replaced by the powder from a dusting box.

Let us hope that the evolution of the barber shop will be rapid and that every State in the Union will soon have laws for the examination and licensing of barbers, and thus limit or entirely prevent the contagion to which the public is now constantly exposed.

PROFESSIONAL SECRECY IN LIFE INSURANCE EXAMINATIONS.

In the last number of this Journal were some editorial comments upon the general ethical relations of professional secrecy. A special instance of such secrecy is brought to mind by a communication in a recent number of the Medical Examiner. The relations of an examiner for life insurance are three-fold; he owes a duty first to the company which employs him; second to the applicant whom he is examining, and third to himself. As to the first, he must find out every possible thing which will probably influence the chances of living out the estimated expectancy of life, about the family and previous history as well as the present physical condition of the applicant. In pursuit of this duty the examiner asks most searching questions, often involving the most private and sacred pages of a man's life history. The family skeletons may be exposed to the examiner, the secret sins of early or even recent life are confessed and in general a most confidential relation is sustained. As to his duty to the applicant, the examiner must investigate carefully any unfavorable points to see whether they really are bars to the obtaining of the protection desired. As to his duty to himself, he must consider his reputation as a careful examiner, the good will of the applicant and the favor of the agent. His reputation as a careful examiner is essential to his retention with the company, the friendly feeling of the applicant towards him concerns his popularity in the community and the favor of the agent concerns his income from future examinations. It seems obvious that, in relation to all these duties, the maintenance of secrecy in the examination is of prime importance. It is surely due to the applicant that nobody not essential to passing on his risk should read the record of the doctor's inquiry and examination. It is surely better for the company to encourage perfect confidence between applicant and examiner. The agent is chiefly concerned in earning his commission and in getting his man passed whether or no. In other words his interest is entirely selfish.

Now, as a matter of fact, most companies have the physician's record blank printed on the reverse side of the application, on the obverse side of which are printed the questions asked by the agent. The whole blank, after the doctor has finished it, is usually returned to the agent, by him to be sent to the home office. Who can doubt that the agent, interested as he is in the pecuniary aspect of the case, very carefully reads everything that the examiner has recorded. Indeed, many agents, gifted with an extra bump of assurance, or accustomed to extremely complacent examiners, will presume to criticise certain entries in the examination blank.

According to this way of making life insurance examinations the physician is subjected to indignity, the company loses the benefits of the most perfect confidence between applicant and examiner, and the applicant is tempted to falsify the shady portions of his record, or, if he believes that his answers are to be kept secret, is grossly deceived

PROGRESS OF IGNORANCE AGAINST SCIENCE.

The osteopaths have won their fight in Iowa. Governor Shaw has signed the bill giving them the right to practice in that State. This is said to be the tenth defeat to scientific medicine in the United State which this so-called "school" has accomplished, Vermont, North Dakota, South Dakota, Missouri, Illinois, Michigan, Colorado, North Carolina and Kentucky (?) osteopaths claim as theirs by right of conquest, and they are pushing ahead with vigor, trying to get every other State in the Union to destroy existing medical laws. They put forward the claim that they are seeking the same rights and privileges as the regulars, and as it does not seem to occur to any one to disprove this claim, its apparent justice wins the heart of legislators, even where no more substantial reason is forthcoming. Why cannot this lie be punctured? They are not seeking the same

rights and privileges as the regulars, but very much more. They seek to evade the examinations and other educational tests of fitness that regulars, homœopaths and eclectics are forced to undergo. Our fight is solely to compel osteopaths to know enough of science to cease being ignorantly dangerous.—*Am. Med, and Surgical Bulletin.*

[The Bulletin is in error regarding North Carolina. We have just and stringent laws governing the practice of medicine. Allopaths, homœopaths, eclectics and the osteopaths are all alike required to pass an examination before our State board before they can practice legally in North Carolina. Our board of examiners has had satisfactory legal rights for over twenty years, and several States have copied, with only slight changes, the laws of our State regarding the practice of medicine.—Ed.]

A WORD AS TO THE SPECIAL TREATMENT OF NEURASTHENIA.

The physician should always bear in mind that in most of these cases worry about their condition—about the meaning of certain symptoms, about the dangers menacing them—is a constant source of distress and tends to prolong and aggravate their trouble. They fear they will commit suicide, that they will become insane, etc. They have morbid fears, and in the attacks are dizzy, fear they are to faint, become paralyzed, etc. They have obsessions that they will kill loved ones, and the like more. Many of these sources of worry they may lock up in their own hearts not even tell their physician.

It is my custom to attempt to learn all that is in the patient's mind. I then explain to him the nature of his disease the groundlessness of his many fears and the great probability of full recovery. Such information, given after a thorough examination has given him confidence in his physician—often lifts the patient from hell to heaven. In obstinate cases the patient will lose courage and hope again and again, and it will require all the patience and tact of the physician to finally lead him to a successful issue.

BOOK REVIEWS.

The Principles and Practice of Medicine. By William Osler, M. D. Third Edition. New York: D. Appleton & Co. 1898.

This is the third edition of this work within a period of about six years.

Few books receive the professional confidence to that extent of that received by Dr. Osler's well known work. The work appeared at a time when there was a need for a new work on this subject, and possessed a touch of originality which set it apart from its competitors. Each new edition has shown increasing care in editing the pages, and many sentences which were evidently dictated and inelegant have been revised.

The present edition has been thoroughly revised and entirely reset in type. The following articles have been rewritten, or are new: Vaccination, Beri-Beri, the Bubonic Plague, Cerebro-Spinal Fever, Pneumonia, Malta Fever, Yellow Fever, Dengue, Influenza, Leprosy, Glandular Fever, the Gonorrhœal Infectlon, Cancer of the Stomach, the Gastric Neuroses, Enteroptosis, the Cirrhosis of the Liver, Jaundice, the Diseases of the Bile-passages, Diseases of the Pancreas, Diseases of the Thymus Gland, Diseases of the Spleen, Lymphateria, Addison's Disease, Eucephalitis, Neurasthenia, Errythro-Melalgia,and many shorter articles.

The first article, on typhoid fever shows careful revision. The author indorses the Brand method of treatment, recognizing the fact for the first time that it has many limitations, and that it can be modified with advantage at certain times and in certain cases. His discussion of Appendicitis is wise and conservative. The section on Diseases of the Nervous System has been rearranged and the diseases have been grouped in accordance with the modern conceptions of the anatomy and functions of the parts.

The book is so well known that further remarks from us are unnecessary. We commend it to our readers in the highest terms possible. From a mechanical standpoint the work is a gem.

Practical Diagnosis. The Use of Symptoms in the Diagnosis of Disease. By Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica, in the Jefferson Medical College of Philadelphia. Third edition, enlarged and thoroughly revised. In one octavo volume of 615 pages, with 204 engravings and thirteen full page colored plates. Cloth, $4.75 net. Lea Brothers & Co., Publishers, Philadelpeia and New York.

Hare's Practical Diagnosis, and Hare's Pratical Therapeutics are companion books and are probably the most widely known and extensively used books that have recently been published. The author is a clear writer and has peculiar aptitude in selecting the pith of any subject and presenting it in the practical order. This is

well illustrated in his Diagnosis, the plan of which is the exact reverse of that ordinarily adopted in text books, the author preferring to present his subject as a disease necessarily presents itself to the physician, viz., symptoms first. A clear understanding by the physician of the value of the symptoms of disease which he sees and of those described by the patient, is of vital importance for the purpose of diagnosis and treatment, and one of the advantages of older physicians over their younger brethren is the ability which they have gained through long training to grasp the essential details of a case, almost at their first glance at the patient. The first eight pages of the work are given to a good introduction, giving a good outline of the work. The work is divided into two great divisions: The Manifestations of Disease in Organs, and The Manifestation of Disease by Symptoms. Under each disease is given a list of its symptoms, and under each symptom a list of the diseases in which it occurs, and, for confirmation, under the various diseases he has brought to his attention the other symptoms to be looked for. The book is richly and usefully illustrated, and most excellently printed. It is not difficult to understand the popularity which has brought this work to its third edition in two years, opportunities which the author has improved by subjecting it to thorough revisions.

A Manual of Venereal Diseases. By James R. Hayden M. D., Chief of Clinic and Instructor in Genito-Urinary and Venereal Diseases, College of Physicians and Surgeons, New York; Professor of Genito-Urinary and Venereal Diseases in the Medical Department of Vermont, etc. New (second) edition revised, and enlarged. In one twelve mo. volume of 394 pages, with fifty-four engravings. Cloth, $4.50 net. Lea Brothers & Co., Publishers, Philadelphia and New York.

This work is divided into three parts: The first 158 pages is devoted to Gonorrhœa and its complications. The following fourteen pages to Chancroid with its varieties, characteristics and treatment. And the remaining portion of the work is devoted to a very complete discussion of the subject of Syphilis.

Dr. Hayden's succinct and clear exposition of venereal diseases has come to a new edition in a remarkably short time, an opportunity which the author has improved with a thorough revision. He has had wide experience in the treatment and management of these diseases, which stamps his writings at once as authority. Under the section on Gonorrhœa will be found many illustrations, the different methods of when and how to use instruments. We commend the work to our readers as a very practical and safe work to follow.

Kings American Dispensatory. New Edition. Entirely rewritten and enlarged by Harvey W. Felter, M. D., Adjunct Professor of Chemistry in the Eclectic Medical Institute, Cincinnati, Ohio; Co-editor Locke's Materia Medica and Therapeutics; President Ohio State Eclectic Medical Association, etc., etc., and John Uri Lloyd, Ph. M., Professor of Chemistry and Pharmacy in the Eclectic Medical Institute, Cincinnati, Ohio; formerly Professor of Pharmacy in the Cincinnati College of Pharmacy; Ex-President of the American Pharmaceutical Association; Author of the Chemistry of Medicines; Drugs and Medicines of North America; Etidorhpa; etc., etc. Two volume edition, royal octavo, each volume containing over 950 pp. with complete Indexes. Cloth, $4.50 per volume, postpaid. Volume I. is now ready. The Ohio Valley Co., Publishers, Cincinnati, Ohio.

This is the standard dispensatory of the Eclectic School, first issued in 1854. This is the eighteenth edition of the work and third revision of this dispensatory, and it occupies the same position in the Eclectic School of Medicine as the National or United States Dispensatories in the regular profession. The new edition preseves the important original matter by Prof. King found in previous editions, which won for it popularity. In other directions it has been revised and rearranged on every page in conformity to the advances of the eclectic school, and contains much recent matter not found in other dispensatories. The work is arranged in alphabetical order, with the name of each drug, with its Botanical Source, History and Chemical Composition, Action, Medical Uses and Dosage, etc. The work makes a large, useful and handsome volume.

Treatment of Skin Cancers. By W. S. Gottheil, M. D., Professor of Dermatology at the New York School of Clinical Medicine, Dermatologist to the Lebanon Hospital, the North-Western and West Side German Dispensaries, Etc. Published by the International Journal of Surgery Co., 100 William Street, New York. Price, $1.00.

The subject is treated in a practical manner, from the standpoint of the general practitioner as well as the specialists, and while every prominent modern method in the non-operative treatment of Cutaneous Cancer has received mention, the author elaborates especially upon the caustic method which experience has commended

to him, and dwells upon the two essential points—recognition and treatment.

This book is printed upon heavy book paper, is substantially bound in cloth, and profusely illustrated.

A Manual of Otology. By Gorham Bacon, A. B., M. D., with an Introductory Chapter by Clarence John Blake, M. D. Lea Brothers & Co., New York and Philadelphia. 1898.

The author has given the student a short and compact treatise of this subject, and at the same time affording him a book of easy reference. As a general thing diseases pertaining to the ear are very little understood, in fact very little attention in colleges is given to this class of diseases. As a natural consequence a work of this character will be of great help to students and physicians. The work is divided into XIV. chapters, the first of which treats of anatomy and physiology of the ear. Chapter II. is devoted to methods of examination of the ear. This is a very important chapter, and one that should be thoroughly studied. The remaining chapters are full of interesting and valuable information. The work is a very practical one, and the methods of treatment are good and clearly defined. The work contains many good illustrations.

This work, in addition to a text covering the more important points in regard to which the student and practitioner require immediate information, is so compiled as to be a text-book of moderate dimensions and a book of ready reference.

The Care of the Baby. A Manual for Mothers and Nurses. By J. P. Crozer Griffith, M. D. Second Edition. Revised. Philadelphia: W. B. Saunders, 925 Walnut Street. 1898. Price $1.50.

The author has furnished in the pages of this book a reliable guide for mothers anxious to inform themselves with regard to the best way of caring for their children in sickness and in health. The first chapter of the book discusses the hygiene of pregnancy, the method of calculating the date of confinement, and similar data. The characteristics of a healthy baby are considered in the second chapter, and the growth of its mind and body in the succeeding one. The chapters which follow relate to the methods of bathing, dressing, and feeding children of different ages, to the hours for sleeping, to physical and mental exercise and training, and to the proper qualities of the children's various nurses and rooms. The book is a most excellent one. The author has made his statements plain and easily understood, yet scientifically accurate. The work will not only be of service to mothers and nurses, but also to medical students and to those practitioners whose opportunities for observing children have been limited.

The book is nicely printed, well bound and up to date in every sense.

American Pocket Medical Dictionary, Edited by W. A. Newman Dorland, A. M., M. D. Philadelphia: W. B. Saunders, 925 Walnut Street. 1898.

This book contains the pronunciation and definition of over 26,000 of the terms used in medicine and the kindred sciences, along with over 60 extensive tables. While this little book is small and convenient in size, yet it is so full and complete as to supply the wants of the practising physician no less than those of the student of medicine. The order of arrangement of matter is strictly alphabetical. Besides the ordinary dictionary words the author has seen fit to insert a considerable amount of matter in tabular form. This matter will prove of value to students for memorizing in preparing for examination, besides serving to group correlated facts in a convenient form for quick consultation.

The Change of Life in Women, and the Ills and Ailings Incident Thereto. By J. Compton Burnett, M. D. Philadelphia: Boericke & Tafel. 1898. Price, Cloth, $1.00.

This little book contains 185 pages of very useful material, with a complete index. It treats of a subject of which very little has been said or written. The many different ailments incident to the menopause are very ably considered. The work is neatly gotten out and the material is of such a character that will be of much help to physicians.

Saunders' Question-Compend No. 7. Essentials of Materia Medica, Therapeutics and Prescription Writing. By Henry Morris, M. D. Fifth Edition. Philadelphia: W. B. Saunders, 925 Walnut Street. 1898.

This the fifth edition of this compend is thoroughly abreast of the times. The author has followed closely the last edition of the U. S. Pharmacopœia. Much matter that had grown obsolete has been omitted, and many new drugs, especially among the groupes of antipyretics and hypnotics have been added, while the older subject matter has been carefully revised and corrected. The dosage of each preparation has been expressed in the metrical weights and measures as well as in apothecaries weights and wine measure.

The arrangement of the work is based on a therapeutical rather than a physiological

method, the entire book is a therapeutical index. This work gives to the student and practitioner, in a condensed form, the principles of this branch of medicine, without a knowledge of which he can neither pass his final examinations, nor practice his profession intelligently. The book is well printed and has a good binding.

W. Arbuthnot Lane, M. S. Cleft Palate. Treatment of Simple Fracture by Operation; Disease of Joints; Antrectomy; Hernia, &c., &c. London: The Medical Publishing Co. Limited.

These clinical lectures upon the subjects named in the title make a very neat and useful little volume of two hundred and seventy-eight pages. All the lectures are clearly written and quite instructive. The chapter on the treatment of inguinal hernia is splendid. The book has a white cover back and printed neatly on white paper.

The True Science of Living, or The New Gospel of Health. By Edward Hooker Dewey, M. D. Introduction by Rev. George F. Pentecost, D. D. Norwich, Conn.; Charles C. Haskell & Son. Gay & Bird, 22 Bedford St., Strand, London, Eng., 1898.

This work contains 323 pages and is divided into two parts. Part I. treats of Nature in Disease. Part II. treats of Evolution of the Breakfast Table. The work is full of interest from beginning to end. It is neatly printed and bound.

The Hygiene of the Voice. By Thos. F. Rumbold, M. D., St. Louis, Mo. 1898.

In this little work the author handles his subject in a masterly manner. He is thoroughly familiar with the subject, and his writing will be interesting and useful to physicians.

The Treatment of Choleraic Diarrhœa. Published by Lambert Pharmacal Co., St Louis, Mo. 1898.

This is a nice little work. It sets forth the many excellent qualities of Listerine. It contains 64 pages and is neatly bound.

Transactions of the State Medical Society of Wisconsin for the Year 1898. Madison, Wis., Tracy, Gibbs & Co., Printers. 1898.

These transactions come to us regularly every year, and the Wisconsin Medical Society are to be congratulated on the success of their meeting as evidenced by the high class of the papers read and printed in their report. It contains a full and complete report of the Fifty-second Annual Meeting held in Milwaukie, May 4, 1898; officers of the association; Constitution and By-Laws; Address of the President; Report of Committees, etc. The papers read before this society are many and are of material which will always be useful to physicians. Dr. Herman Reinking, of Milwaukee is President, and Dr. C. S. Sheldon, of Madison, is Secretary.

LITERARY NOTES.

The October Forum.—The Forum for October has the following strong and varied table of contents: "England and Russia in the Far East," by Geoffrey Drage, M.P.; "The Populist Conceit—The Free Coinage of Silver by the United States Alone," by Senator Justin S. Morrill; "About Play-Acting," by Mark Twain; "The conduct of the Cubans in the Late War," by Maj.-Gen. O. O. Howard; Amateurs in War," by A. Maurice Low; "Our War with Spain, from the Political Point of View," by Henry Litchfield West; "The Dangers of Imperialism," by Prof. William Macdonald; "Bismarck," by Prof. Dietrich Schafer; "Tammany Past and Present," by Edward Clay; "A Decade of Magazine Literature," by Rev. Charles H. Eaton; "Tramps and Hoboes," by E. Lamar Bailey; "Intercollegiate Debating," by Cecil Frederick Bacon; "Industrial Investigations · Fallacious Statistics and Erroneous Generalizations," by Jacob Schoenhof; "The Byron Revival," by Prof. William P. Trent.

Lippincott's Magazine for November, 1898.—The complete novel in the November issue of Lippincott's, "A Triple Entanglement." by Mrs. Burton Harrison, has its scenes mainly in Spain and England. The hero is an American, whose course of true love does not by any means run smooth, but leads him into safe harbor at last. The tale is one of this favorite author's best, and perhaps the longest which has ever appeared in Lippincott's.

"Mercer's Best Shot," as described by Joseph A. Altsheler, was a very remarkable shot indeed, at an enemy whose shadow only could be seen. More vigor of conception and description has seldom been put into two pages.

J. Armoy Knox, in "The Petrified Legs," revives and amplifies the Irish legend of Lough Neagh. "The Destroyer" is an allegory by Paul R. Heyl.

Jessie F. O'Donnell gives an account of "The Horse in Folk-Lore." Paul Ward Beck describes "A Ute Funeral." Fanciful Predictions of War" and "Our Soldiers'

Songs" are the titles of two brief papers by William Ward Crane.

Jane Ellis Joy has a little assay on "The Craze for the Unconventional," and J. K. Wotherill another on "The Golden Gift," which is Imagination.

"Orintal Stage-Craft" is considered by L. W. The familiar question, "Who is your Favorite Author," is animadverted upon by Annie Steger Winston.

The poetry of the number consists of quatrians by Julia Schayer and Mary E. Stickney, and couplets by Carrie Blake Morgan and Clarence Urmy.

Many readers of Mrs. Humphrey Ward's latest story "Helbeck of Bannisdale" must have wondered what opinion an intelligent Catholic reader would be likely to have of it as a portaiture of English Catholics. The question is answered very interestingly in a caustic review of the story by an English Jesuit, which the Living Age for October 15 reprints from The Nineteenth Century.

MISCELLANEOUS.

The Early Diagnosis of Diphtheria.

At the Mississippi Valley Medical Association, Nashville, Tenn., Dr. Jaques selected this theme.

He said that outside of laryngeal complications the mortality from diphtheria was due to the toxin produced by the Klebs-Lœffler bacillus. No physician could successfully treat diphtheria unless he understood the nature of this toxin, how it was produced, and how the cells might be fortified against its destructive action. He must understand that the Klebs-Loeffler bacillus was adistinct living entity, or vegetable organism; that one of the products of its existence was diphtheria toxin, just as the result of the life of the yeast plant was alcohol. To appreciate the danger of his patient a physician must understand the rapidity with which these bacilli multiply under favorable conditions. The clinical symptoms manifesting their residence might give no indication as to the rapidity with which the fatal amount of toxin was being produced. It being understood that toxin was a product of these germs, their multiplication meant an increased amount of toxin, which soon reached the fatal point unless checked by the use of antitoxin. This demonstrated the importance of a physician knowing at the earliest possible moment what germs were present in an angina. In order to ascertain the value of direct diagnosis, by which is meant the examination of material taken directly from the infected area without waiting for incubation, the Chicago health department had introduced the following culture outfit for the use of physicians:

A sterilized swab was placed in a glass tube; a slide carefully wrapped in paper was placed with this in an envelope, together with a culture box and directions for using the same. Physicians were requested to inoculate the swab from the inflamed site, spread a little of the mucus on the slide and allow it to dry. The culture medium was inoculated from the same swab and it was returned to the glass tube. The whole outfit was then to be sent to the nearest incubator station or laboratory. When no antiseptic treatment had been administered before the culture was taken, and the disease manifested malignancy by stupor, hoarseness, or swelling of the cervical glands, it had been possible in about 50 per cent. of the cases to find sufficient bacilli to warrant a diagnosis of diphtheria, even before any trace of membrane was visible. When it had been possible to get a small portion of membrane to spread on the slide, there had been no difficulty whatever in about 75 per cent. of the cases in making a direct diagnosis. In the malignant form of diphtheria nearly 50 per cent. of the cases were fatal unless proper treatment was administered. Any physician who neglected to make a correct diagnosis during the time when the remedy was efficacious, *i. e.*, during the first two or three days, was responsible for the result. The technique of bacterial diagnosis of diphtheria was simple. The entire outfit for this work might be obtained for less than $100. The essentials might be acquired at home by any physician who was willing to devote no more than his leisure moments to it. To demonstrate the protective value of antitoxin, the following experiment had been conducted:

On October 10th, in the presence of Dr. F. W. Reilly, assistant health commissioner of Chicago, Dr. Wynekoop, assistant bacteriologist, the essayist, and Dr. Adolph Gehrman injected nine guinea pigs with four times the fatal doses of diphtheria toxin. The first three animals had been immunized two days previously by the injection in each of one-tenth of a cubic centimetre of antitoxin. The next three received two-tenths of a cubic centimetre of the same antitoxin each, following the injection of toxin. The third three had no treatment whatever after the injection of the toxin. The pigs were correctly labeled as to condition. They presented decided effects upon the fourth day. All pigs that

received antitoxin were alive and apparently well. Of the three not protected, two were dead. The third three being still alive would indicate the possession of natural immunity against the toxin.

Employment of the Vaginal Douche.

Byron Robinson (Med. Record) rather favors the use of this therapeutic measure. He says: When properly used it is capable of doing a vast amount of good. Its utility depends upon the amount of fluid, the degree of heat, the composition of the douche, the position while taking it, and on the method of using it. A couple of quarts of warm water is worthless as a douche. He concludes the article as follows:

1. Use a fountain syringe holding four gallons of water, with a four-foot head. 2. Begin (for married women) with three quarts of boiled water at 103 deg. 3. Increase the heat one degree at each sitting until as hot as can be borne. 4. Increase the amount of the douche one pint each time until four or five gallons are taken. 5. Use the douche in the morning and in the evening when retiring. 6. The duration of a four gallon douche should be thirty minutes. 7. The patient should lie on the back with the thighs flexed on the abdomen and the legs flexed on the thighs. 8. The douche should be taken on a level plane, the ironing board serving a good purpose, and not in the bed or on the water-closet or in the bath-tub. 9. The douche should never be taken in the standing or sitting posture. 10. A handful of salt and a teaspoonful of alum may be added to each gallon of water—the salt to prevent reaction, and the alum to astringe and check waste by secretion. 11. The vaginal tube used in giving the douche should be sterilized, and every patient should, of course, have her own tube.

The good effects of the douche may be summarized as follows:

1. It contracts the tissues (muscular, elastic, and connective). 2. It contracts the vessels (arteries, veins and lymphatics). 3. It absorbs exudates. 4. It checks secretions. 5. It stimulates. 6. It relieves pain. 7. It cleanses. 8. It checks hemorrhage. 9. It curtails inflammation. But it must not be forgotten that the douche may also have evil effects, and those are: 1. It may check normal secretions and thus induce abnormal germ-growth. 2. It may congest the organs. 3. It may irritate the parts. 4. It may produce disagreeable sensations. 5. It may aid in the rupture of a pyosalpinx or an extra-uterine pregnancy.

One Hundred Cases of Pulmonary Tuberculosis Treated with Large Doses of Beechwood Creosote.

Dr. Lamplough (Canada Medical Record) suggests that the following points are worthy of consideration and further investigation:

1. The best beechwood creosote can be given with benefit, in amounts varying from 120 to 240 minims daily, in cases of pulmonary tuberculosis. 2. The drug is best administered in cod liver oil or in a spirituous solution, and in some cases the "creosote chamber" or oro-nasal inhaler may be ordered in addition with advantage. 3. The dose should be small at first, but it can be rapidly increased to 40 minims three times daily for an adult. In three cases of 30 minims three times a day were well borne by children. 4. Large doses rarely cause any gastric disturbance; on the contrary, the appetite is frequently increased, symptoms of dyspepsia disappear, and cod liver oil is more easily assimilated. The cough, expectoration and night sweats are diminished, and the physical signs improved. 5. Owing to its disinfectant action in the alimentary canal the drug probably diminishes the risk of tuberculous enteritis by auto-infection when patients swallow their sputa, but owing to the increased peristalsis, which is created by creosote, it is usually contraindicated in cases where the ulceration is already advanced. 6. The drug does not tend to cause haemoptysis, but rather to prevent its recurrence. 7. Creosote does not irritate the normal mucous membrane of the genito-urinary tract. 8. Owing to its extremely small cost pure creosote can be given to a much larger number of patients than the carbonates of creosote and guaiacol, which respectively cost four times and twelve times as much as the older drug.

Life Expectancy of Syphilis.

Dr. J. M. Hyde, in the Medical Examiner, makes the following statements:

1. Inherited syphilis is one of the most fatal of all disorders affecting the human race, and under the most favorable circumstances, irrespective of abortion and miscarriage, nearly ninety per cent. of children born living, subsequently die. 2. Acquired infantile syphilis is very rare, is an exceedingly manageable disease, and is one in which probably a large proportion of all infants survive. 3. Between eighty and ninety per cent. of all adult patients affected with acquired syphilis escape its gummatous complications. 4. The percentage of

patients affected with gummatous syphilis who perish is not known, but one may doubt if it exceeds two per cent. of the from ten to fifteen per cent. of those who suffer from gummatous complications. 5. The expectancy of life is probably not affected by coincidence of syphilis with other diseases, and the prospect that the patient with acquired syphilis will ever suffer from either struma, tuberculosis, or cancer, is exceedingly small. 6. The natural evolution of acquired syphilis in untreated cases in the adult is not in the direction of a lethal issue, but rather in the line of physical degeneration and grave complications due to involvement of the nervous system and of the bones, without affecting organs essential to the continuance of life. 7. It is unfair to charge an extra risk for the insurance of syphilitic applicants otherwise in sound health and insurable, as any assumed unfavorable longevity prospects due to the fact of infection are more than counterbalanced by the extreme improbability of death from either tuberculosis or cancer. 8. If what precedes has a fair foundation in fact, it follows that the syphilitic applicant for life insurance should be examined with a view, not so much to his syphilitic history as to his condition with relation to all the other items making up a satisfactory risk. In other words, if he has a good family history, a sound constitution, excellent habits, and has reached, but not passed, a satisfactory age, his expectancy of life is probably that of other individuals in similar conditions, without added risk in consequence of his specific disorder.

Electrolysis in Gonorrhea.

Dr. G. T. Mundorff, (Medical Record, Aug. 20, 1898,) contributes a paper on this subject and brings out several important points. As a rule he says all forms of chronic urethritis can be cured by regular dilatations and urethral injections of a silver nitrate solution. Electrolysis is indicated only in the glandular form of chronic urethritis. Electrolysis will cure the larger proportion of chronic glandular urethritis. If electrolysis fail, dilatation treatment is indicated. In some cases of chronic urethritis dilatation treatment preceding electrolysis proves beneficial. In those cases in which firm and dense cicatrices have developed in consequence of electrolysis, regular dilatations should be proceeded with. During treatment, endoscopic examination of the urethra should be regularly made, controlling thereby under the direct guidance of the eye the progress of the disease, and, according to the conditions found, modifying treatment.

The Treatment of Locomotor Ataxia by Exercise.

Dr. Zenner (Cin. Lancet Clinic) concludes an interesting paper with the following summary:

1. All cases are benefited by the exercise treatment, many to the degree of apparent recovery, unless there are special contraindications to the treatment. Failures usually mean faulty methods or that the treatment has not been persevered in sufficiently long. 2. Contraindications are: Loss of vision, mental impairment, bone and joint-disease, spasticity, and muscular atrophy, the presence of strong irritation symptoms, rapid progress of the disease, a state of great exhaustibility, and serious organic disease. 3. In cases of anemia, poor nutrition, and lax joints these conditions should be remedied before the treatment is instituted. 4. The conditions most favorable for the treatment are: A stationary or almost stationary state of the disease, general good health, intelligence, hopefulness, and perseverance. 5. Light cases are more amenable to a (practical) cure, but bad, even bed-ridden cases often give brilliant results. 6. The necessary duration of treatment varies from a month or more for the lightest to six months or a year for bad cases, but the exercises must be kept up in order to insure the continuance of the improvement. 7. Success of treatment depends upon thorough knowledge of the method. This is especially true of bad cases. 8. Exercises should be chosen most suitable to the existing ataxia, and every effort should be made to do them with the greatest precision. 9. The sense of fatigue is often blunted in ataxics, while overfatigue injures them. The patient should, therefore, be guarded against too taxing or too prolonged exercises, or other unnecessary efforts. 10. To obtain most benefit from the treatment, the constant supervision of the physician, at least in its early periods, is absolutely necessary.

The following officers were elected at Nashville of the Mississippi Valley Medical Association:

President—Dr Duncan Eve, Nashville, Tenn.; First Vice-president—Dr. A. J. Ochsner, Chicago, Ill.; Second Vice-president—Dr. J. C. Morfit, St. Louis, Mo.; Secretary—Dr. Henry E. Tuley, Louisville, Ky. (111 W. Ky. St).; Treasurer—Dr. Dudley S. Reynolds, Louisville, Ky. Next place of meeting, Chicago. Chairman of committee of arrangements—Dr. Harold N. Moyer. Time of meeting—October, 1899, date to be determined by the Executive officers and the Chairman of the committee of arrangements.

Subcutaneous Nailing, Exploratory Incision, and the Extended Elbow in Condyloid Fractures of the Humerus.

John B. Roberts, A. M., M. D., read a paper with this title at the July meeting of the British Medical Association (Philadelphia Medical Journal, Sept. 24th, 1898). He said:

The interference with mobility results largely from distinct alterations in shape of the articulating surfaces, due to the incorrect coaptation, though overgrowth of bone from stripped-up periosteum, and ossific depositions in the sero-ligamentous capsule aid in its production. Experience seems to show that mobility of the joint is, as a rule, promptly regained when the play of the olecranon and coronoid processes around the trochlear surface is not obstructed by bony displacement or new deposits. In persons of an arthritic diathesis intra-articular and pararticular adhesions may undoubtedly restrict motion, but these are not the usual cause of ankylosis after fractures of the humeral condyles. To hemorrhagic effusions into the joint have been attributed adhesions of newly formed connective tissue and thickenings of the synovial membrane; but these causes of ankylosis are relatively unimportant.

Much attention has been given in recent years to the possibility of fractures of the lower end of the humerous causing cubitus varus or "gunstock deformity" of the arm, thereby interfering with the so-called "caring function" of the upper limb. This deformity has been supposed to result from ascent of a detached internal condyle; descent or rotation forward and inward of detached external condyle; and rotation forward and toward the middle line of the body of the condyloid mass, after transverse or comminuted fracture.

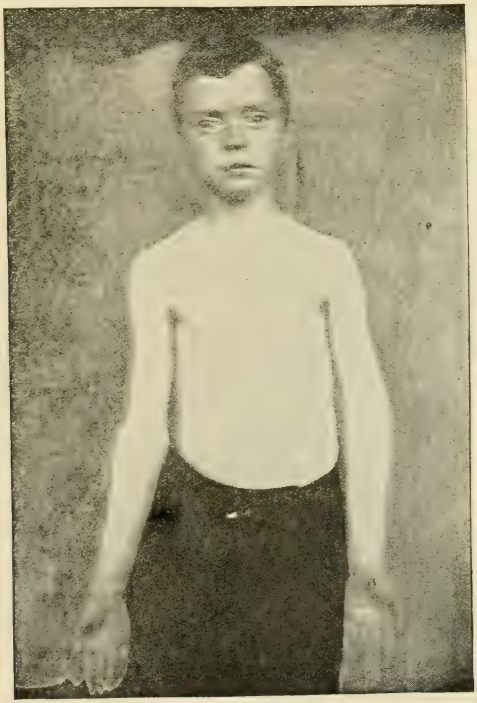


Fig. 1.—Gunstock deformity of the left elbow after fracture of the lower end of the humerus.

H. L. Smith, of Boston, believes† that

†Boston Medical and Surgical Journal, October 18, 1894, p. 389.

this deformity is not likely to occur from fracture of a single condyle, but after a break traversing the entire width of the humerus; and he considers that the deformity has been given unnecessary importance in the determination of the best posture in which to treat fractures at the lower end of the arm-bone. Stimson, of New York, on the other hand, has asserted‡ that displacement of a condyle, not exceeding ¼ inch or ⅛ inch in amount, may effect a change in the humero-ulnar angle. The analogous displacements produced intentionally, by Ogston's condyloid and Macewen's supracondyloid osteotomy, for the relief of knock-knee, suffice to explain the mechanical factors in the production of gunstock deformity of the arm and convince me that fractures of one or both condyles may produce the unsightly deformity. This I have proved by experimental fractures; some detaching the internal condyle, others causing more complicated bony lesions of the lower end of the humerus. I am not so certain of the deformity being readily produced by descent of the external condyle, when it alone is separated from the shaft of the bone.

‡Trans. American Surgical Assn., IX, 1891. p. 270.

It must be recognized that the humero-ulnar angle differs greatly in individuals. I have found it less conspicuous in children and women than in men; and believe it to be most marked in those of well-developed muscular power. Smith has found it to vary between minus 5 deg. and plus 30 deg., and he states that even in the same person the two uninjured arms may differ as much as from 10 deg. to 15 deg. He also found that the width of the condyloid portion of normal arms differed on the two sides of the same person. The avorage variation in 50 cases measured was 3.1 mm. He investigated 75 cases of united fracture of the elbow, treated according to traditional methods, to find that the average difference on the two sides was 5.5 mm. The increased width was, if I correctly understand him, on the side injured. He makes the important statement that in 20 cases treated by acute flexion, the average difference in width after union was 4 mm., and that in these same cases the carrying angle was unchanged in 40 per cent. In the 75 cases treated by various persons in the ordinary ways the carrying angle was unaltered in 10 per cent.

Fig. 2.—Gunstock deformity of the left elbow after fracture of the lower end of the humerus.

It is probably true that the conversion of the humero-ulnar angle into a straight line,

or its change to an angle in the opposite direction, has little effect on the wage-earning capability of the patient; but it certainly produces an unsightly deformity, and impairs the symmetry and integrity of the human mechanism. It does not, of itself, interfere with the mobility of the joint. I recently saw a young lady who, about 15 years ago, when a child, broke the condyloid portion of the left humerus. I took part in the treatment of the injury, which was by means of a rectangular, trough-shaped posterior splint. She has marked gunstock deformity, as a result of the defective treatment, but has perfect mobility of the joint. The hand is, of course, brought nearer the thigh when the limb hangs vertically, but this defect brings no special inconvenience. It might, perhaps, be a disadvantage to a woman in the lower walks of life, who was çompelled to carry burdens in the dependent hand. I refor to this patient because it was my dismay at my attention to the disadvantage incident to right-angled flexion in the management of these bony lesions; and because she by chance came iuto my office, after many years' absence, while I was preparing this paper.

It is an acknowledged duty of the surgeon to restore, after injuries, the anatomic symmetry, as well as the functional usefulness. Hence, no extended argument is necessary to prove that it is best to adopt that line of treatment which will attain both ends. Retention of the normal humero-ulnar angle of a broken elbow is, therefore, not only desirable for cosmetic reasons, but is demanded by anatomic and surgical considerations.

The occasional deformity and limitation of motion resulting from fractures of the condyloid portion of the humerus are doubtless due, not only to incomplete reduction of the broken bone, but to imperfect fixation, which has allowed the properly read-

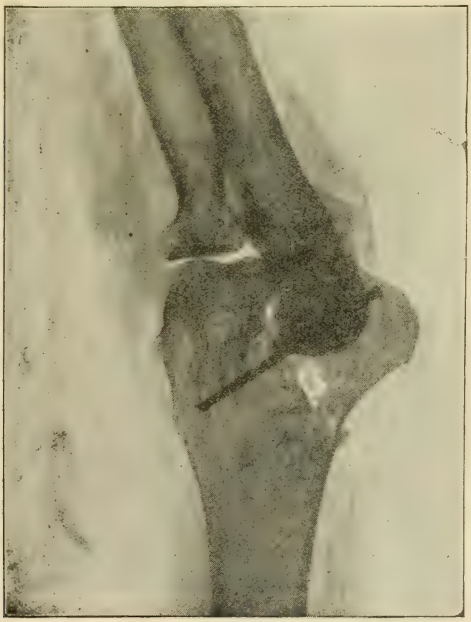


Fig. 3.—Experimental fracture of internal condyle (made with osteotome). Fragments kept in position with wire nail driven through skin. Skiagraph taken with dorsum on photograph plate.

the deformity remaining after the treatment adopted that first forcibly directed justed fragments to slip again into abnormal relations. Stimson is, probably, not

alone in his belief‖ that, in "inter-condyloid fracture with marked separation, there is no practicable means surely to maintain reduction." He says, further, that the impossibility of direct control of the fragments, the contraction of muscles, and the pressure of fascia combine to make the result largely a matter of chance. This opinion was confirmed, he states, by seeing and feeling in open fractures the difficulty caused by the shiftings of the fragments,

I have been making some experimental observations during recent months on the use of nails for direct fixation of fractures, having been led to the investigation by my metacarpal bone. I have found that fractures of the condyles of the humerus, made in the cadaver, can be satisfactorily fixed after reduction, by driving wire nails through the skin into the bone and across the lines of separation.

The accompanying skiagraphs show the method better than a verbal description.

I became convinced by this experimental work of the efficiency of fixation by means of slender nails, and of the wisdom of adopting the procedure in the comparatively few severe fractures of the humeral condyles needing direct fixation. I have had, however, no personal clinical experience of such

Fig. 4.—Experimental V-shaped fracture of condyles (made with osteotome.) Fragments fixed with wire nail driven through skin. Skiagraph taken with anterior surface on photographic plate.

success at the Philadelphia Polyclinic Hospital in nailing together the fragments of a operative treatment in elbow injuries, and my opinion was based on inductive reasoning alone, and the use of similar means in resection and osteotomy.

‖Trans. American Surgical Assn., IX, 1891, p. 272.

A few days ago I came upon Stimson's statement that in an open fracture of the condyles he had "felt constrained to pass a long steel pin transversely through both condyles and the long projecting end of the upper fragment, for in no other way could they be kept in apposition."§ I had undoubtedly seen this statement before, but had forgotten it. Stimson does not give the result, but I can see no reason to doubt that the coaptation continued satisfactory. If the operative field was free, and kept free, of septic contamination, the result ought to have been good.

I have had made special "fracture-nails" of tempered steel, with a drill-shaped point and a long, square head. These are readily pushed through the skin, muscles, and compact exterior of the bone by means of a handle that fits the head. The handle is then detached and the nails are driven into the deeper portions of bone with a hammer. After two, three, or four weeks the nails are pulled out with clawlike forceps. For convenience I have had a hammer-head made upon one side of the forceps.

During the driving of the nail or nails the fragments, already adjusted, are held by the fingers of the operator or assistant; and after fixation is accomplished an aseptic dressing and a light splint of wood, metal, paper, or gypsum may, or may not, be applied.

Ordinary wire nails and a hammer may be used with satisfaction, but the want of temper and point makes them rather less convenient.

If the nail first inserted does not effectively fix the pieces of broken bone, it should be withdrawn and reinserted, or one or two additional nails should be used. The placing of the nails will be found much more easy in open than in closed fractures; and will require more skill and patience in comminuted fractures than in those in which there are but two fragments.

There will be but a limited number of fractures in which this operation is demanded, but it will, I believe, be found valuable

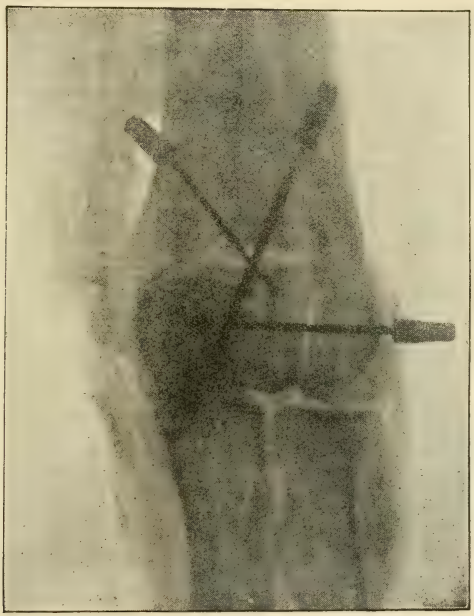


Fig. 5.—Experimental T-shaped fracture of condyles (made with osteotomy). Fragments fixed with three "fracture-nails" driven through skin. Skiagraph taken with anterior surface on photographic plate.

§Trans. American Surgical Assn., IX, 1891, p. 272.

in a certain proportion of cases. No one should attempt the operation unless he is a believer in asepsis and a conscientious exponent of modern aseptic surgical methods. Careless or incomplete asepsis is not permissible. It is as reprehensible as in abdominal or cerebral surgery.

If the exact direction of the fracture-lines cannot be determined by palpation and manipulation, the use of the fluoroscope or, better, the study of skiagraphs, will often permit the surgeon to determine how best to nail the fragments together. If sufficient definite information cannot be obtained by palpation, manipulation, and the use of the Rœntgen-rays, exploratory incision is the safest course in severe injuries of obscure character.

Aseptic incision of joints, being in competent hands practically free from risk to life, is demanded in a certain number of elbow-fractures, because the anatomic integrity of the joint and its functional usefulness are jeopardized by the surgeon's ignorance of the lesion and his consequent inability to repair the structural damage. After incision, the fragments can be accurately adjusted; the torn periosteum replaced; muscles, fascia and nerves disentangled from undesirable positions between

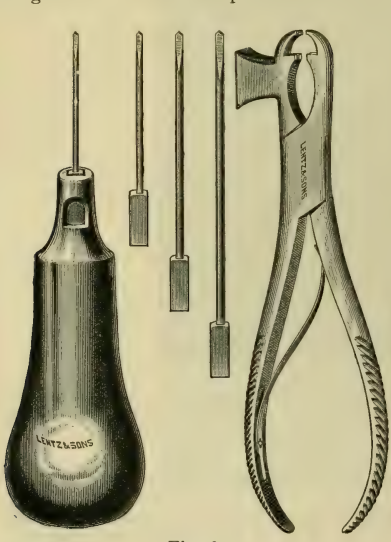


Fig. 6.

"Fracture-nails and Hammer-forceps."

the bone-fragments, and sutured if lacerated; and fixation of the fragments consummated. It is probable also that cure will be hastened and pain lessened by the removal of bloodclots and the leakage of synovial fluid and inflammatory exudate, permitted by the incision; and that-fat-embolism and non-union will be less likely to occur.

The well-informed modern surgeon, who must know the safety of aseptic operations, should not hesitate to adopt exploratory incision in appropriate cases. The patient with a bad fracture of the elbow has an intrinsic right to the benefit derivable from incision in competent aseptic hands.

A Study of Two Cases of Cerebral Tumor, with a Report of the Results of an Operation in the One and an Autopsy in the Other.

Alfred Wiener, M. D., (New York Medical Journal, Oct. 15th, 1898,) contributes an article of unusual value on this subject. The following is an abstract of the paper:

The ætiology and localization of cerebral tumors present so many points of interest that each case still deserves detailed study. Moreover, further light is needed as to the advisability of surgical interference for curative or palliative effect. It is just such observations which greatly enhance the value of patho-anatomical investigations, and which help to clear up some of the doubtful questions in relation to the anatomy and physiology of the central nervous system. Every case is valuable, and I do not hesitate, therefore, to place on record two cases of cerebral tumor which it has been my good fortune to observe over a considerable period of time. In both cases the diagnosis has been confirmed. In the one patient the tumor was revealed at the operation; in the second, I am able to demonstrate the specimen obtained by the autopsy.

Case I.—F. S., twenty years of age, was brought to my clinic at the Mount Sinai Hospital Dispensary in June, 1897. The history taken at that time was as follows: He was born of apparently healthy parents; both still living and enjoying good health. The father is employed in a brewery and more or less addicted to alcoholism. Patient is the second child of three, who are still living and healthy. The oldest is married and has two children living and perfectly sound in health. Mother of patient has had no miscarriage, either before or after the birth of this boy. Patient was a seven-months' child, but born apparently in a normal manner. During her pregnancy, mother enjoyed good health. This boy was three years of age before he could either

walk or talk. From that time on he developed in a normal manner, and suffered from no illness until he was seventeen years old. He then suffered from an acute otitis media of the right ear, with rupture of the tympanic membrane, and a profuse purulent discharge for several months, after which time the ear healed and left the patient slightly deaf on that side. In March, 1897, he was sitting at a table with some friends playing cards, when suddenly the cards dropped from his hands, the patient lost his speech, and felt, as he expressed it, his right upper extremity and face grow stiff. This lasted only a moment, but made him feel very uncomfortable, so that he retired shortly afterward, fell asleep, and awoke the next morning apparently well. This attack, he asserted positively, was not attended by any loss of consciousness. Previous to this attack, he admitted, he had been suffering from headaches, which at times were very severe and often accompanied with vomiting. These he attributed to indigestion, and treated them as such. The pain was usually frontal in location, but at times the whole head seemed to ache. One month after the first attack he had a second one. This was much more severe, and seemed to affect the entire right side, but especially the face and arm. In this attack he lost consciousness and remained in a dazed condition for two hours. Thereafter a difficulty in expressing himself was noticed. Patient spoke more slowly, and it appearod to those about him that at times only with the greatest effort could he give utterance to his thoughts. His headaches began to grow more severe and frequent. His eyes appeared peculiar and seemed to alter the natural expression of his face. The right hand was growing weaker, and he gradually began to use his left in preference. His sight was rapidly failing.

The family history, as well as that of the patient, is negative so far as syphilis or tuberculosis is concerned. The boy denies any alcoholic excesses. He appears fairly well nourished, but has a distinct apathetic expression in his face. Skull tender at times to percussion over left frontal area. A special examination was made of the muscular sense (weights, passive movements, and objects of various shapes), but patient responded normally to all. Smell and taste were also normal. No trophic disturbances of any kind were present.

Such a history naturally pointed to the presence of a neoplasm in the brain. An abscess was excluded, for the simple reason that it does not occur spontaneously. There must be present somewhere in the body a cause for such a secondary infection. In regard to tuberculous and syphilitic affections, the history was negative. The patient was nevertheless put upon antisyphilitic treatment, the result of which I will mention later.

In regard to the location of this neoplasm, I was unwilling at first to express any positive opinion. The absence of the deep reflexes, the suspicious reaction of the facial nerve, the marked affection of the optic nerves, and the motor aphasia, which might just as well have been taken for a dysarthria, together with the peculiar condition of the right half of the tongue, all these pointed to a lesion at the base of the brain, in the neighborhood of the pons and cerebellum. On the other hand, the partial paralysis of the face and arm, together with the Jacksonian form of epilepsy, frontal headache, and painful percussion over this area of the skull, argued in favor of a lesion in the neighborhood of the face and arm centre in the central convolutions, It was manifestly impossible to ascribe all these symptoms to the presence of a single lesion. The possibilities of multiple tumors, however, was borne in mind.

The patient was carefully observed, and after four weeks a positive conclusion was arrived at. The reflexes in the lower extremities began to return. The right limb was becoming paretic. The electrical reaction in the facial nerve varied itself so frequently that finally no reliance was placed upon it. As the headaches were growing more severe, and the disturbance in speech showed itself to be positively a motor aphasia, and since no other basilar symptoms were added, as we would naturally expect with a growing neoplasm, I came to the conclusion that the tumor was cortical, involving the face and arm centre, together with the posterior extremity of the third left frontal convolution—viz., the speech centre. During all this time antisyphilitic treatment had been severely carried out, but with negative results.

The next point whsch naturally suggested itself was that of surgical interference. Would an operation be of any benefit to this patient? Before this question could be decided, it was necessary to determine three things. One had already been determined and was favorable—viz., the location of the tumor. The other two were, first, the nature of the tumor, and, second, its size, if possible. In regard to the nature of the neoplasm, the slow growth and its irritative nature, shown by the diminished reflexes and the epilepsy, led me to believe that we were dealing with a glioma. In regard to the size, no definite opinion could be arrived at. An operation was nevertheless

advised, and for the following reasons: In the first place, I was reasonably sure that the tumor had been properly located and might, therefore, if not too large, be removed; secondly, if it could not be removed, we were at least justified, as experiences have shown, in doing a trephine operation for the relief of the severe headaches and epilepsy.

The patient was sent to Mount Sinai Hospital and submitted for operation. He was operated upon by Dr. Gerster, July 31, 1897. The site of the operation was over the area representing the speech, face, and arm centre, located on the left side of the skull. The operation through the scalp and skull was attended with so much loss of blood that it was thought advisable to continue it at a later date. A few days later, after the patient had sufficiently recovered from the shock, the wound was again opened, this time by Dr. Lilienthal. The dura was incised, and at once revealed a dark tumorous mass, which occupied the entire opening, and in the exact location as the diagnosis had suggested. The slightest manipulation of this mass was again accompanied by so much hemorrhage that its removal was out of the question. A piece was removed for microscopical examination, and proved it to be teleangiectatic glioma.

The patient remained in the hospital until the wound had practically healed. Up to September 29, 1897, the patient, who was at home and totally blind, was entirely free from headaches. No epileptic seizure had occurred since the operation. On that day (September 29th) he began to complain of pain over the left facial region, and within a few hours there developed a lymphangeitis and cellulitis along both sides of his face and neck, together with chills and a pyæmic temperature. As the tumor, which of late had slowly been growing out through the opening made in the skull, had suffered an abrasion upon its surface, it was suspected that an infection at this point might have taken place. With an aspirating needle, I finally succeeded in finding a small abscess located about three-fourths of an inch from the surface. This was opened and about an ounce and a half of pus evacuated. The patient now rapidly returned to his former condition.

During the months of October, November, December, January, February and March, the patient had grown more apathetic and rarely gave utterance to any thought spontaneously. Could not repeat his name when asked to do so.

An examination made on March 31, 1898, revealed the present status: A paresis affecting the right facial, right upper and lower extremities; also some loss of power in the left leg and arm. Patellar reflexes present on both sides. Patient performs any movement which is asked of him, but somewhat slower than a normal individual. The movements on the right side are atactic. There is a double abducens palsy, more marked in left eye; nystagmus is present in the right eye, when looking toward the

.....5 inches.
. .....3¼ inches.
.....3½ inches.

Fig. 1.—Picture taken March 31, 1898. Side view of tumor.

left. Tongue is protruded straight, but looks shriveled on the right side. Slight analgesia over left side of face. There is still this constant tendency to fall toward the right side and backward. Constant drooling at the mouth is present. His speech is more a matter of pantomime than the actual pronunciation of any word or words. Muscular sense on right side is very much affected.

Fig. 2.—Picture taken March 31, 1898. Front view of tumor.

Measurement of tumor: Length, five inches—no increase; breadth of upper por-

tion, three inches and a quarter—increase, a quarter of an inch; breadth of lower portion, three inches and a half—increase, a quarter of an inch.

The patient up to the present time has suffered from no severe headaches or epileptic seizures.

Case II.—G. W., aged seven years, was brought to my clinic October 19, 1897. The history obtained at the time was as follows: He was born of healthy parents. Father, who was a very heavy drinker, died of pneumonia; mother is living, and was married a second time. From her first marriage there were four children, of whom two are living. The oldest died of diphtheria. The two younger are still living and healthy. After the birth of the second child, which is the patient, the mother had two miscarriages. In her second marriage she has had two children, who are living and enjoying good health.

The birth of this patient was perfectly normal. He was born at full term. He learned to walk and talk at the age of sixteen months, and was perfectly well up to the age of twenty months, when, I should judge from his mother's discription, he suffered from an attack of rheumatism. He was sick for five weeks. From that period, up to a short time previous to when I first saw him, he was as well developed physically and mentally as children of that age usually are.

During the summer of 1897 the mother noticed that whenever the boy was decending a flight of stairs he did so in an awkward manner. When questioned about it, he answered that his right leg pained him. On September 30, 1897, the boy came home with a marked swelling over the left frontoparietal region of the skull, and complained to his mother that a man had struck him with his fist. In a few days this swelling assumed a dark bluish discoloration, and the boy complained of headaches. These headaches were present almost daily, and sometimes so severe in character that the boy had to be sent home from school. At times he would be compelled to remain away one or two days. It was noticed that the boy was not as bright as formerly, and that his reports, sent home from school, were very poor. At home it was observed that he was using his left hand in preference to his right one, and that very often, when taking fluids into his mouth, they would flow out of the right side and soil his clothes. For this he was often scolded and punished, the mother at that time not having recognized that the boy was really ill. The headaches became more and more severe, until finally, on October 19, 1897, he was brought to my clinic.

The examination at that time revealed the following status:

A paresis of the two lower branches of the right facial nerve, without any electrical change. Tongue was protruded toward the right side. Pupils responded to light and convergence, but somewhat sluggishly. Analgesia and slight dullness to the sensation of touch on right side of face. Paresis of right upper and lower extremities, with some disturbance of sensation, as on the face, but not quite so marked. Patellar reflexes were wholly absent on both sides. In all actions which he performed he gave preference to the left arm and left leg. Chest and abdominal organs in perfect condition. No bladder or rectal trouble. There had been no epileptic seizure. There was only the slightest ataxia, or rather awkwardness of movement, noticeable in the right upper extremity. Although presenting a distinctly apathetic appearance, the boy was fairly intelligent and physically well developed. An examination of the optic discs showed a double optic neuritis.

The history both of the parents and the boy was negative, so far as syphilis or tuberculosis was concerned.

In regard to the location, it was believed, on account of the complete hemiparesis with the partial hemian-æsthesia, and in the absence of any epileptic seizures or loss of muscular sense, that this neoplasm was subcortical and located either within or in close proximity to the internal capsule. The possibility of an involvement of the centrum ovale producing the same symptoms was not lost sight of. In regard to the nature, a glioma was suspected, on account of the location and general symptoms. The patient was put upon antisyphilitic treatment and carefully observed.

Up to December 2d the condition remained about the same. The patient was able to walk about, while, on the other hand, the upper extremity and face were completely paralyzed. The reflexes (patellar) were exaggerated on both sides. I was now inclined to believe, on account of the extensive paralysis in the arm and face, and the only slight involvement of the leg, together with the marked pressure symptoms, that after all we should find the greater part of the tumor occupying the centrum ovale. If it were occupying the internal capsule or its immediate neighborhood, as I was inclined to believe in the beginning, at this stage of the development we would naturally expect, in a growing neoplasm, just as much involvement of the leg as of the arm and face. The antisiphilitic treatment had

been given a fair trial, and, as not the slightest improvement had been obtained, it was discontinued. It was now thought entirely justifiable to make a large trephine opening over the left side of the skull, hoping in this manner to relieve the patient of the pressure symptoms.

On December 3d the boy suffered from an attack of tonsillitis, and the operation had to be postponed. On December 13th the child was taken down with scarlet fever, and the operation had to be deferred once more. During this attack of scarlet fever the symptoms produced by the neoplasm were not very much aggravated. On January 20, 1898, he was pronounced well, so far as his scarlet fever was concerned; however, he was very weak and emaciated. His headaches were excruciating. Contractions appeared on the paralyzed side. This spasticity, however, could be easily overcome, and at times disappeared of itself. The boy was now totally blind and unable to walk. He continued in this pitiable condition until February 7th, when his suffering was relieved by death. He was intelligent to the last moment, and recognized me only a day previous to his death.

Autopsy was made by myself four hours after death. All abdominal and thoracic organs were found normal. Kidneys were very much congested. Brain weighed fifty-two ounces, and the convolutions over the left hemisphere were very much flattened. Otherwise nothing was visible on the surface. The left hemisphere felt decidedly softer to the touch than the right. The whole brain was placed in a four per cent. solution of formalin, which was renewed every two days for one week. At the end of the second week it was placed in a three per cent. solution of Muller's fluid, and allowed to remain there for ten days. This method of hardening brought out the contrast of colors in the gray matter, white matter, and tumor much better than I have ever seen them when other methods have been employed.

Horizontal sections were made through the hemispheres, and at once revealed a soft infiltrating tumor occupying the greater part of the left hemisphere. In the upper portion the entire hemisphere appeared to be involved, and in the frontal portion the cortex was encroached upon. In the lower part of the hemisphere the tumor was entirely frontal in location. The centrum ovale, corpus striatum, and internal capsule were almost completely destroyed. Here and there, in the tumorous mass, there were small hæmorrhagic areas. The corpus callosum also presented some slight infiltration. A microscopic examination proved the tumor to be a gliosarcoma. A more detailed report concerning the pathology of this tumor will be published later on.

I would like to call attention to three especial points of interest which existed in common in both cases. These are (1) the absence of the patellar reflex in the beginning of the disease; (2) the frontal ataxia; (3) the ætiology.

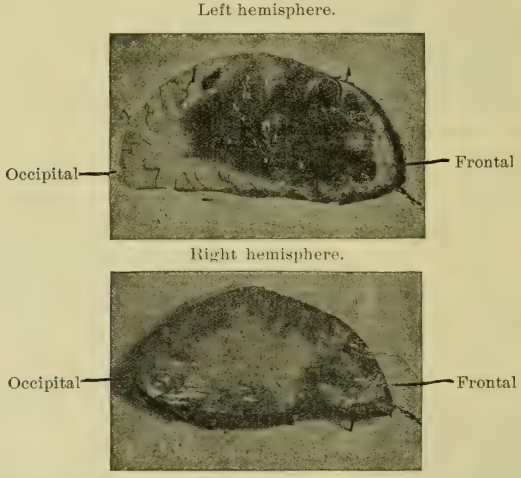


Fig. 3.—Horizontal section made through right and left hemispheres. Showing normal right hemisphere, and infiltrating tumor in left hemisphere.

The Danger of Confounding Chronic Syphilitic Fever with Tuberculosis.

Dr. E. G. Janeway, in a paper read before the Society of American Physicians, reports six cases of loss of flesh, continued fever, night sweats, pain in the side, commonly the right side, etc., in which a diagnosis of tuberculosis had been made. (The New York Medical Journal.)

Three of the cases had been sent to health resorts frequented by phthisical patients, but had manifested no improvement, and one had been ordered to such a resort. Upon an examination, a history of bygone syphilis was elicited in five of the cases. The remaining one was that of a young child in whom a positive denial of syphilis on the part of both of the parents led to an omission of any cross-examination, though an enlarged liver led to a suspicion of syphilis, which was positively confirmed later, on autopsy. This was the only case that died. All the other five promptly improved under antisyphilitic treatment. Dr. Janeway concludes:

The consideration of the facts here narrated has convinced me that many physicians are not aware that fever may attend the late manifestations of syphilis, more particularly of visceral syphilis. The neurologist is sufficiently alive to the importance of always considering the possibility of syphilis being an ætiological factor in the obscure diseases of the nervous system, and he very generally gives the patient the benefit of a doubt, when uncertain, and attempts a diagnosis by the use of antisyphilitic measures. Moreover, the class of cases to which I have drawn your attention do not go to a syphilologist, but to the general or consulting physician, and this paper has been presented with the view of directing attention to the necessity of considering syphilis as a possible explaining cause of those obscure phenomena which are usually only considered to import tuberculosis, malaria, or sepsis. Moreover I do not find that in the presentation of this subject the syphilologist directs attention specific enough to the possibility here presented. Ignorance of the fact that syphilis, in what is termed its tertiary period, may occasion a fever of long duration, malaise, emaciation, perhaps perspiration also, without of necessity presenting such definite local manifestations, either external or internal, as can be made out of such casual examintion as often occurs when a patient seeks advice at the office of a consultant on one or a few occasions is largely the explanation of the mistakes.

In two of the cases related it was not possible to state the situation of the disease after very careful examination. We must confess that not a few physicians are inclined, with the above assemblage of symptoms, to determine that tuberculosis must exist; and, having reached that decision, enough of that normal variation of physical signs will be made out to lead to the belief that the explanation has been found in certain pulmonary changes. Moreover, it has seemed to me that physicians having a strong belief that tuberculosis existed may have had an auditory illusion, or hallucination. It is far wiser and better, to my way of thinking, to hold the mind in such a condition of attention in doubtful cases, as shall admit of expression of doubt, than to attempt a positive diagnosis on insufficient data.

Christian Scientists and Faith Healers in Great Britain.

Judging from accounts received it would appear that the Christian Scientists and others of the same race are quite as numerous and as successful in gaining converts by their pernicious teachings in Great Britain as here. The Medical Record, October 22, 1898, in commenting upon this subject, says:

The fact is made clear that in both countries the law is powerless to check the imposture; at least such is the case in England, where the Christian scientists, faith healers, and the rest of the brotherhood are legally entitled to undertake the treatment of patients, either personally or by correspondence, and to fleece their victims to the utmost extent; but with one reservation—a healer is liable to a charge of manslaughter should a patient die while under treatment.

The exact legal position occupied by the quack fraternity was, according to London *Truth*, thus defined by an eminent authority in answer to a question as to why some of the professional organizations did not look out for a chance to prosecute some of the mind healing sisterhood. The legal luminary thus begins his interpretation of the English law on the matter by affirming that donkeys and dogs are better protected from the machinations of quacks and frauds than is any human being, and then proceeds as follows: "Any outsider who calls his place a veterinary forge commits an offense against the veterinary act, which provides that no person who is not a member of the Royal College of Veterinary Surgeons can take or use a title or description which will lead any member of the public to believe that by going to his, the

advertiser's, establishment, such member of the public would procure skilled advice or assistance. And yet a quack may call himself doctor, or, if fortified by a worthless diploma, style himself M. D. with impunity. The reason is that, while under the veterinary, or the dentist's act the mere fact of using a title or description of the character referred to, whether such title relates to the individual or to his premises, is an offence in itself, under the medical acts a man cannot be held guilty of the offense of calling himself doctor, or M. D., or surgeon, unless by so doing he wilfully and falsely pretends he is a registered man. The courts have again and again held that whether or not a man so falsely pretends is a question of fact for the magistrate. The courts have also held that when a man has a foreign diploma giving him the title to call himself M. D., the educational value of which may be practically worthless, he held falsely to pretend that he is an M. D. Had the words 'wilfully and falsely' been omitted from the medical act, and the phraseology been the same as in the veterinary and dentist's acts, conviction of an offender would be easy. * * * Until the medical acts forbid practice in every shape and form by unregistered persons, it would be hopeless to expect to secure a conviction under these acts. No man in his senses would suggest that these pseudo-Christian quacks are wifully and falsely pretending to be registered practitioners. Even the fools who seek their aid do not believe this. At the same time there is a grave difficulty in the way of prosecuting for false pretences. The defence would call a number of dupes who would swear to a cure having been performed on themselves." Therefore, in Great Britain and in many parts of America the only way of checking the evil is by enforcing the law against the healer who may be implicated in a case which terminates fatally. This view of the matter should be earnestly impressed upon the relatives of the dupes who have fallen victims to their fatuous folly, as well as on any physician who may chance to be concerned in the affair. In every instance of a like nature the doctor should stoutly refuse a death certificate, regardless of the social standing of the deceased or whatever the desire of the relatives to avoid a scandal.

It would also undoubtedly act as a deterrent to the increasing custom seeking relief at the hands of these impostors, if the lay journals were like London *Truth*, freely to ventilate the subject and endeavor so to educate the weak-minded members of the community that they might see and turn from the errors of their ways before it was too late.

Exercise and Over-Exercise.

Dr. Lauder Brunton (British Medical Journal, October 22, 1898) at a recent meeting of the York Medical Society said that exercise which put into action every muscle of the body, but did not put any one into action for too great a length of time at once, or in too violent a manner, was exceedingly beneficial, but in applying this excellent principle he had the temerity to compare unfavourably with lawn tennis the three most popular physical recreations of the day—cricket, golf, and cycling. Moreover, he classed together croquet, cricket, and golf—rather a curious collocation—on the ground that in playing them there was not the same general movement of the whole body that was necessary in lawn tennis or polo. As to croquet all will probably be ready to agree, but as to cricket and golf, it is not likely that their devotees will be disposed to accept Dr. Brunton's rather sweeping assertion. What muscles of the body are brought into play in lawn tennis that are not brought into play by, say, a fast bowler, we should be rather curious to know; and as to golf, the distribution of the stiffness after a day's play in a man out of condition and practice, leads at least to the suspicion that very few muscles in the body have not been called into action. As to cycling, Dr. Lauder Brunton said that it tended to narrow the chest and to cause, more or less, a permanent stoop. He added that, as it had become so very general an amusement, its effects on the body as compared with those of other physical exercises must be very carefully watched. Like most of us, Dr. Brunton has been struck by the fact that the girl of the period tends to be most divinely tall, and he seems disposed to put this down to the great popularity of lawn tennis a few years ago. It is certainly a pity that this very excellent game appears to be going out of fashion owing to the great popularity of cycling, which, we should be disposed to agree with Dr. Brunton, is not an exercise so well calculated to produce an all-round development of the muscular system. Although he spoke in faint praise of cricket and golf, he admitted that they shared with tennis one essential feature of a good game—intermittent action of many groups of muscles. Passing on to speak of over-exercise, he observed that what was sufficient exercise for the muscles might be over-exercise for the heart, so that schoolboys ran a risk of injury if

their athletic power were judged from their apparent size and strength and not according to the strength of the heart. Dr. Brunton then pointed out that a continuous strain upon one set of muscles was not only painful and exhausting but injurious, and illustrated this point very happily by referring to the fatigue experienced by men and women employed in shops, who were compelled by custom to stand for many hours a day. He showed a rest by means of which a shopwoman could sit down and take the weight of the body off the legs, whilst movements behind the counter were hardly interfered with. The cause of the quickened breathing associated with muscular exertion was really the poisonous products formed by muscular action, and the shortness of breath was due to heart disturbance. Thus, in the case of growing boys, football, or paper-chases might lead to distinct heart strain. Another factor which Dr. Brunton said must be regarded in exercises for boys and young men was that mental fatigue caused bodily exhaustion. If boys were pushed both at lessons and at exercises they were much more likely to break down than if they were pushed at one or the other alone. In adolescence the heart, like other muscles, though it was more easily strained, recovered more readily, and with moderate care would recover completely. In conclusion, Dr. Brunton dwelt on the important point that, while in middle life the heart was less liable to strain, yet as age advanced, and especially if the arteries became atheromatous, the heart was not only more easily affected by strain, but had less power of recovery—a fact which has its obvious bearing on the kind and amount of exercise which should be taken as age advances.

Surgery in the Recent War.

At a meeting of the New York Academy of Medicine, on October 6th, Major W. Duffield Bell, Surgeon of the Seventy-first New York Volunteers, described in an interesting manner his experience in the recent war. He said that in Cuba the transport of the wounded was a source of anxiety to the surgeons; men with desperate wounds had to walk or crawl distances of from one mile to several miles over a wild and rugged country. Men who had been shot through the abdomen by the Mauser bullets were known to have walked for three or four miles, and to arrive at the hospital in excellent condition, recovering eventually without operation.

He stated that within his personal knowledge men had been wounded in the liver and kidney without serious consequences. At a range of over 200 yards the Mauser bullet makes a small wound of entrance and only a slightly larger one of exit. If the bone was shot through at a shorter range there was always some comminution. In several instances the Mausr bullet passed through the skull without causing any apparent injury to the brain, and the men returned to duty in two or three days. In regard to injury to the soft parts, he stated that in eight instances wounds had been inflicted over the femoral artery in such a situation that it would seem as if the bullet must have gone through the vessel; although the fact appears almost incredible, it appeared that the artery had receded from the bullet. In some of the cases all that could be detected was an aneurismal varix. In nearly every case the soft parts had healed very quickly—in three or four days. The doctor insisted that in spite of the denials that have been published the Spaniards used "explosive" bullets, consisting of a brass coat containing soft lead; on impact this bullet "exploded" and produced a ghastly wound. It was used by the Spanish volunteers, who fired it from the old Springfield rifle. The simplest antiseptics answered best in the field. Iodoform was found to produce such irritation of the skin in a tropical climate that it had to be abandoned. Laparotomy was performed in several cases, almost invariably with a fatal result. On the American side 280 were killed and 400 wounded in the campaign. Only sixty-five of the wounded died of their injuries, and but a small number had required additional care since their return to the United States. The Krag-Jorgensen bullet at short range was found to be explosive, like the Mauser bullet, but the range of the former was shorter by 300 or 400 yards. On the visit of the British Consul to the American lines during the cessation of hostilities, he was asked to notify the Spaniards that if they did not stop using "explosive" bullets the Americans would retaliate in kind. To this the Spaniards replied that the Americans were also using them, and upon investigation it was discovered that the Krag-Jorgensen bullet acted in this manner. In the 1415 cases treated at Siboney there were only four deaths up to July 7th. Traumatic fever was almost unknown in the camp. It was quite different with the Spanish soldiers. Those who received wounds in the naval battle did badly. There were no clean wounds here, so that amputations instead of resections were required. All the wounded Spanish soldiers coming under his observation had been injured by more than one American bullet. He did not see a single case of tetanus.

The Use and Abuse of Digitalis.

Dr. J. F. Roscoe (Louisville Medical Journal, November, 1898,) deals with this subject as follows:

From reading the literature on the subject, as well as the association with my professional brethren, I have been constrained to believe that this potent agent is often too indiscriminately used under the impression of its being a heart tonic. That it is a heart tonic in properly selected cases none will deny. How, then, does it act as a heart tonic, and when is it indicated? If we examine into its physiological action we find it is an arterial sedative. It slows the action of the heart. If, then, you have a heart beating too fast, say 100 to 120 per minute, and you slow it down to 80 or 90 it gives it a longer interval in which to recuperate, just as you slack the speed of a tired horse to let him rest. This is what digitalis will do for the heart. If, then, you have an accelerated pulse, give digitalis. If a too slow one, give strychnine. But remember they are both potent agents, and be certain you do not kill your patients with either. Remember we live in the days of fads, and that routinism is the curse of the age.

Slept Fifty Days.

A case of somnolence occurred in England within the past year, in which the patient, a young naval officer, slept for more than fifty days. During the year preceding his long sleep his time had been spent in severe study and he had not allowed himself the proper amount of sleep. In a detailed description of the case the British Medical Journal states that the young officer's year's work culminated in a severe competitive examination for position in the navy, in which examination he was one of the fifteen successful applicants. About a week after his examination he began to grow drowsy, and promptly went to sleep from which he could with difficulty be aroused. A couple of days later he sank into a calm, peaceful sleep, from which it was impossible to arouse him completely, and when aroused partially he would drop off again almost immediately into deep slumber. No evidence of uremia was discoverable, nor anything suggestive of catalepsy. His color was good during the entire period, his extremities warm, temperature normal, tongue thickly coated with light brown fur, and the pulse slow and feeble. There was no anesthesia or suggestion of headache. The knee-jerk was exaggerated, particularly on the left side, and ankle-clonus was sometimes present. The sleep was at no time "profound." Toward the end of his sleep he could be more easily aroused, took more nourishment, and began to gain in weight. When he awoke he had perfect recollection of all the events that had transpired up to the day he went to sleep, but none of anything that had been done to him during his sleep. He had to learn again how to walk and how to balance himself. He regained his coordination rather slowly. and at the end of four months after his awaking had not completely regained his ability to walk naturally. Two months later he had so far recovered as to attend to his duties on board ship.

Baneful Effects of Modern Use of Alcohol.

Dr. Crothers, of Hartford, Conn., in a paper read at the New York County Medical Association, Oct. 17th. 1898, discussed this subject in a very conservative and intelligent way. He stated, among other things, that the ingestion of alcohol accelerated the heart's action ten or fifteen beats a minute at first, but after a while the circulation became slower, so that the pulse rate dropped at least as much as fifteen or twenty beats below the normal. Vision was always diminished and rendered unreliable by the ingestion of alcohol. The acuteness of the sense of hearing was likewise impaired. The increase in the pitch of the voice of persons under the influence of alcohol was due to impaired hearing. Hallucinations of hearing were frequent under such circumstances. The senses of taste and smell were also influenced by alcohol. The sense of touch was always exaggerated or diminished, and careful measurements of muscular force showed that the muscular system did not escape the deleterious action of this poison. If the temperate man suffered from the use of one or two ounces of alcohol in this appreciable way, then the continual or frequent drinking of alcohol must exert a distinctly deleterious influence. All experimenters agreed that when alcohol was taken in excess the result was a profound tissue and cell degeneration and general starvation of the tissues. Alcohol, by its anæsthetic action, soothed the irritable nerve centres, and the effects were so pleasing that the individual desired to repeat the experience. Often this desire to seek relief by its anæsthetic effect was really an indication of a diseased condition, which perhaps was disclosed only by a post-mortem examination. A century ago the anæsthetic action of alcohol created dementia and idiocy, but to-day it was more apt to cause delirium and paralysis. Heredity seemed to be one of the most prominent causes of inebriety.

Conservatism in the Use of the Stomach Tube.

Benedict (Amer. Medico-Surgical Bulletin) concludes an article as follows:

1. Don't use the stomach tube simply because you want to be considered scientific and up to date. 2. Don't withdraw stomach contents for examination unless you are prepared to examine them. 3. Don't discard external means of physical diagnosis because you have a stomach tube. 4. Don't expect too much from diaphanes, electric buzzers, buckets, complicated tubes, etc. All of these have their uses, but are available in very rare cases. 5. Don't pass the tube without first examining the mouth and throat, and also the heart and arteries, and at least inquiring as to pregnancy, piles and other possible complications. 6. Don't pass the tube as a means of treatment unless you know precisely what you wish to accomplish with it. 7. Don't introduce a weight and bulk of water which you would consider injurious if swallowed. As a rule don't introduce more than a pint at once, and never more than a quart. Don't be deceived by the ball-valve action of a particle of food or any other cause which may allow water to remain in the stomach. Make sure that you withdraw as much as you introduce, except that you may allow a little for leakage through the pylorus, or possibly absorption. Remember that the more a stomach can hold the less it ought to. 8. Don't imagine that the gastric douche will cure all the diseases of the stomach; you would laugh at a gynecologist who held such a view about the vaginal douche. 9. Don't imagine that a stomach is doing well until it can digest plain, but varied, diet without mechanical interference. Don't speak of a case as cured until he can indulge in all the ordinary food without medical aid and without injury. 10. Don't let the patient learn to pass the tube himself. This rule holds for his benefit as well as yours. 11. Don't fail to use the tube or to have it used when the indications outweigh the contraindications.

Practice of Medicine by Clergymen.

The London Lancet publishes an account of a Roman Catholic bishop of Augsburg who recently made a communication to the clergymen of his diocese on the subject of the increasing tendency of the clergy to give advice in cases requiring medical treatment, a practice which he condemns as being at variance with the ordinances of the church, and he charges his clergy to avoid anything which may have the appearance of interfering with the work of the medical profession. This order is the more remarkable because Woerishoffen, where the late Father Kneipp lived and his successors still continue his work, is in this diocese. The expression of similar views by other clerical dignitaries would no doubt have a beneficial influence as tending to prevent misunderstandings between the two professions. That quackery has its most fervent adherents among the upper classes was clearly shown by a recent occurrence. One of the leading newspapers of Berlin published a letter written by a medical man showing that a so-called "magnetopath" had pretended to cure patients by means of magnetic fluid coming from a well-known Berlin medium now resident in America. This medium had formerly caused a certain amount of sensation in connection with spiritualist meetings, but eventually left the city when it was shown by some medical men that she had been carrying on a system of imposture. A few days after the insertion of this letter a public declaration appeared in the advertising columns of the leading Berlin journals, signed by a great number of patients of the quack. The signatures were for the most part those of members of the nobility and of the upper classes, who solemnly stated that they had been cured by this man after having been attended without success by legally qualified medical practitioners. The great popularity of every kind of quack treatment among the upper classes leave little ground for hope that unqualified practice will be made illegal.

Increasing Demands for the Sanitation of Creameries.

Dr. Lippincott in the July issue of the "Public Health," contributes a paper with this title. He said: "As is customary, at such establishments, the wagoner brought the milk can filled with "slop" that is supposed to be good enough for hog feed. It is generally understood on the outside that the farmer who sends his milk to the creamery gets skim milk in return, but when it comes to reality, they are only entitled to the slop out of the out-wells where all refuse of the creamery is conducted. This is exposed to all kinds of weather, but nothing affects these wells as does the sun and hot weather. They are never cleaned out, and having run into them each day skim milk, water, dirt and washings from the buildings and utensils, this mixture came home in our milk cans. Imagine my surprise when the man emptied the return cans of slop, which had the foulest odor, not unlike the very worst kind of a water closet or human excreta. After a few returns of this kind my man refused to wash the cans, and

no one could blame him. If I could present a sample to this meeting your noses would suggest that one dose would suffice. Yet the farmer continues to cart this home, and his swine are forced to drink it or starve. This is not only true of our creamery, but all over the State. In our experience, after washing and rewashing, the cans retained the filthy odor two or three days, yet the farmers fill the same cans in the evening with fresh milk for the next trip; this is repeated daily; from this milk comes the butter to your table and mine. I am informed that the State Board of Health is unable to remedy this evil for lack of legislation. New Jersey is fully prepared to meet and correct any such matters. Imagine my surprise upon receiving from Dr. Lee, the secretary of the State Board of Health, a reply to my suggestion that an inspector be sent, that this great commonwealth has no such inspector.

Conservative Surgery of the Ovary.

Dr. C. Martin, in a recent issue of the British Medical Journal, states that the physiological value of the ovaries are best demonstrated by removing both of them and noting the results.

(a) The woman becomes absolutely sterile. (b) Menstruation ceases in about 95 per cent. of the cases. (c) The uterus, and to a less extent the vagina and vulva, undergo a process of atrophy. (d) The nervous symptoms of the menopause appear abruptly and violently, namely, heats and flashes, perspirations, palpitations, giddiness, depression of spirits, and a general unstable condition of the nervous system. (e) In a considerable majority of cases there is a diminution or total abolition of the sexual instincts. (f) The patient has a tendency to obesity.

If one ovary or even a portion of one ovary be left none of these symptoms appear. There is no physiological difference between a woman with two healthy ovaries and a woman with but a healthy portion of one ovary.

In inflammatory disease of the appendage of one side the healthy appendage should be permitted to remain. Where both appendages are diseased and should be removed a total vaginal hysterectomy should be done. Fibroma, dermoids, and cystoma may occasionally be removed by cutting a wedge out of the ovary, and sewing the remaining portions together with silk or catgut. Sclerosis of the ovaries giving rise to hysteria, anæmia, dysmenorrhœa, menorrhagia, neuralgia, etc., are often treated by the total removal of both ovaries with the result that menstruation ceases, but the symptoms continue. As an alterative the author advises ignipuncture. It can be done by vaginal section. The ovaries are drawn down into the vagina by either an anterior or posterior colpotomy, and from one to a dozen punctures are made with a thermo-cautery into any cysts or thickened portions of the capsule that may exist. Of fourteen cases operated upon by the author seven made complete recoveries and five failed entirely. Parovarian and broad ligament cysts can often be removed and the ovaries left in situ.

In hysterectomy, if the ovaries or a portion of one ovary is left in situ, the artificial menopause does not occur, as it will certainly do if the ovaries are removed together with the uterus. The author claims that the nervous combustion is greater where the uterus is not removed along with the appendages than where the hysterectomy is complete. In some mysterious fashion the uterus is a source of disturbance to the nervous system. The author, therefore, concludes that where it is necessary to remove the uterus, and not the appendages, it is best to leave the appendages; but where it is necessary to remove both appendages, it is best to remove the uterus also.

Urethro-Rectal Fistula.

Dr. J. P. Tuttle, in a recent issue of Mathews Medical Journal of Louisville, reports twenty-five cases, three of which were attended by the writer. Of these, eight were cured by operation and four by palliative means. These latter were all recent cases. The operative procedure advocated in this paper is illustrated by the following two cases. Case 1: Urethro-rectal fistula following urinary abscess, stricture of membranous urethra. Duration: two months. It was $\frac{3}{4}$ inch long, and opened into the rectum $\frac{1}{2}$ inch above anus. Operation: sphincter incised, and all cicatricial tissue removed, thus freshening the edges of the fistula at both ends. The rectum was freed from its anterior attachments for $\frac{3}{4}$ inch above fistula. Perinæal section: the incision being carried backward into the fistulous opening, that portion of the urethra floor which had been destroyed was closed by means of flaps of skin dissected upon either side, sewn together with catgut sutures over a full-sized sound. The edges of the gut were brought together with sutures, the perinæal bowel was plugged, and the sound removed from the urethra, and a soft French catheter was substituted, which was retained for eighteen days. Convalescence was uneventful, the perinæal wound

healing in six weeks. Case 2: Urethro-rectal fistula of long standing, with stricture and ulceration of the rectum. Operation: in two stages; first, left inguinal colotomy, posterior proctotomy, and scraping of fistulous track; second, a plastic operation similar to the first case; at a later date the artificial anus was closed. In this case the perinæal wound closed in three weeks, since when micturition has been normal.

Postponement of the Third Pan-American Medical Congress.

International Executive Commission of the Pan-American Medical Congress.

Office of the Secretary.

Cincinnati, Nov. 4th, 1898.

My Dear Sir:

I have the honor to announce that in April, 1898, I received from Dr. Jose Manuel de los Rios, Chairman of the Committee on Organization of the III. Pan-American Medical Congress, a request that, in consequence of the then existing rebellion in Venezuela, no definite arrangements be made at that time relative to the meeting of the Congress previously appointed to be held in Caracas in December, 1899.

The following communication relative to the same subject is just at hand:

Caracas, September 25, 1898.

Dr. Charles A. L. Reed,
Secretary of the International Executive Commission, Cincinnati, Ohio.

Dear Sir:

After having sent my communication, dated April last, I find it to be my duty to notify you that, although the consideration pointed out in it have already ended, our country has been scourged by small-pox which has taken up all our physicians' activities and time, depriving them of going into scientific works. And, as that state of mind of our people and government after such calamities as war and epidemic, would greatly interfere with the good success of our next meeting, I beg leave to tell you, in order you will convey it to the International Executive Committee, that our Government and this Commission would be grateful to have the meeting which was to take place in Caracas in December, 1899, adjourned for one year later.

I am, dear doctor, yours respectfully,

THE PRESIDENT.

(Signed) Dr. Jose Manuel de los Rios.

In accordance with the request of the Government of Venezuela, and of the Committee on Organization, the III. Pan-American Medical Congress is hereby postponed to meet in Caracas in December, 1900.

For the International Executive Commission.

Charles A. L. Reed,
Secretary.

Hydatidiform Mole.

Kennedy (New York Medical Journal, September 17, 1898) describes a case of this character. He says:

It is generally considered now that hydatidiform mole is a proliferative degeneration of the chorionic villi; that the origin of this degeneration seems to be maternal; that among the maternal predisposing causes syphilis holds an important place. Just how the vesicles constituting the hydatidiform are formed is not satisfactory to all. Since the origin of this degeneration seems to be maternal, the degeneration of the chorion must antedate and produce the death of the fetus. According to Darland and Gerson, from a study of 100 reported cases, the most favorable age is between 20 and 40, 68 per cent. having occurred between these ages; they also found that uterine hemorrhage was a common symptom, and that there was a great tendency to septic intoxication after delivery. Their studies show a mortality of 10 per cent.

A healthy fetus and a hydatidiform mole have been known to develop side by side. This would lead us to believe that the degeneration of the chorion was due to fetal disease. The weight of authority, however, seems to be that hydatidiform mole does not result from diseases of the embryo. Retained placenta cannot become affected with hydatidiform mole,—conception is necessary to the development of hydatidiform mole.

The degeneration affects the villi of the chorion within the first ten weeks of pregnancy.

Volkmann reports an interesting case where the degenerated villi had invaded the uterine blood sinuses, and by pressure led to so extensive and atrophy and absorption of the uterine walls as to leave only a thin, transparent septum between the mole and the peritoneal covering of the organ. Schroder reports two cases of this character, in one of which the cystic degeneration was attended by fatal peritonitis and the other rupture of the uterus and death from hemorrhage into the peritoneal cavity.

Poison in Milk Preservatives.

This was recently discussed in the Public Health Journal. The editor says:

The use of salicylic acid as a food preservative is becoming more common

every day, and the large increase in nervous diseases is attributed to this cause. One prominent physician said recently that in seventeen cases out of twenty he has treated for nervous ailments, he has traced the origin of the disease to the use of foods highly seasoned with "preservatives," which are only other names for salicylic acid.

"The action of the acid on the digestive organs," said the physician, "is slow, and in its gradual way produces nervousness, the most prevalent disease of the day. By its slow action the poisonous effect of the drug is not detected, but once it gets a grip on the digestive organs, nervousness surely follows. There is a law against the sale of salicylic acid, and it should be rigidly enforced."

Dr. Henry Leffmann, the chemist, whose specialty is the analysis of food products, said that the consumption of salicylic acid is enormous.

"Salicylic acid is a white powder, in its commercial form, and is an artificial product made from carbolic acid, and is used extensively to preserve cheese, milk and bottled beers. The acid acts directly on the digestive organs, and causes them to become clogged. The frequent use of salicylic acid has a positive bearing on the digestion of starch contained in foods, and is especially dangerous to use in infant's foods. It is commonly used by careless people, who do not give proper attention to the preparation of children's milk.

"The artificial form as used by brewers in preparation of bottled beers is poisonous, and while its use is prohibited by law, it is, nevertheless, sold in large quantities. Several years ago the sale was hampered by an attack made upon it by medical men, and for a short time it was not commonly used."

Dr. Leffmann said the acid is being sold here under several forms, and its common use is causing much suffering. He thought some action should be taken similar to that in Trenton, N. J., where several agents were arrested for selling milk preservatives and held for further hearing to await the result in the condition of young infants supposed to have been poisoned by the acid.

Continued Fevers of North Carolina.

Dr. Benj. K. Hays, of Oxford, N. C., is sending out blanks to the prominent members of the profession throughout the State, to obtain data regarding continued fevers. His object is to make a report at an early date. The following questions are asked:

I. How do you classify the fevers seen in your practice?

II. To what extent do they prevail, and what is the mortality of each?

III. State frequency and character of eruption?

IV. Do you see typhoid and malaria in the same patient? (If so, state whether you regard this as a mere coincidence or do you believe the two to be combined in one disease?—typho-malaria.)

V. Do you see continued fever which is neither typhoid nor malarial?

VI. If so, give clinical history of such a case. If not, how do you classify our simple continued fevers?

VII. To what extent, and with what result do you use quinine in such fevers?

The Treatment of Constipation.

Dr. T. Lauder Brunton (The London Lancet) regards this symptom as the reaction of a healthy organism to unfavorable surroundings, viz., too soft food, too little water or too little exercise. For the first, one may advise bread, either made of the whole grain or with more or less bran; vegetables in abundance, either cooked, as spinach, cabbage, broccoli, Brussels sprouts, cauliflower, carrots, turnips, parsnips and the like, or raw, as tomatoes or celery. Fruits are of advantage—melons, apples, oranges and figs. When stewed prunes are inefficient in keeping the bowels open, some senna leaves may be tied in a bag and placed in a receptacle in which the prunes are to be stewed. This plan has often been successful when the ordinarily stewed prunes have failed. Sugars in themselves are useful laxatives. A favorite addition to the breakfast is marmalade which contains vegetable salts, sugar, and also the hard skin of the orange cut into small pieces, which are rather indigestible and give a mechanical stimulus to the bowel. Water, insufficient in quantity or abnormal in quality, is a cause of dryness of the bowel, which results in constipation, which may be lessened by the taking of a tumblerful of hot or even of cold water on rising in the morning and on going to bed. For waters from a chalky soil, some of the bottled waters, soda, potash or aerated water should be substituted. The habit of evacuating the bowels at a certain time should be formed; at night if the patient suffers from hemorrhoids. Exercise is of advantage, massage, rubbing the bowels in the direction taken by the hands of a watch,

is also useful. In delicate women, especially those suffering from ovarian or uterine trouble, exercise may be harmful. In defection where the floor of the perineum is lax it may be necessary to press the fecal mass forward in something of the same way in which the accoucher turns forward the child's head. Open air defection causes a stretching of the floor of the pelvis and affords support to the fecal mass as it is forced backward by the action of the abdominal muscles. This can be imperfectly imitated in the closet by the patient leaning forward to an acute angle. In some cases hydropathic treatment is useful, wet compresses to the abdomen two or three times daily and sitz baths, cold in summer and with the chill taken of in winter.

Marriages Between Cousins.

Dr. John Inglis, in the August issue of the Columbus Medical Journal, concludes an article on this subject as follows;

1. In the marriage of cousins-german, the effect upon offspring will follow the law of heredity, the consanguity *per se* being *nil*. 2. Given high physical, moral, and intellectual development, the effect of the union would be beneficial rather than otherwise. 3. Special talents, either for good or evil, may be developed by intermarriage. This was the case in the historic musical family, the Bachs, where the musical talent was developed to a high degree of excellence. 4. In an effort to compare one hundred cases of marriages between cousins-german, with one hundred average marriages where no relation existed, he took by lot from a physician's case-book, who had practiced in a town of fifteen hundred inhabitants for thirty years, and knew their family histories well, the names of one hundred families, and had this physician give him the record of these one hundred with regard to sterility, pulmonary, mental, and congenital diseases. These were then compared with the marriages of cousins. The latter showed a lower percentage of sterile marriages and a slightly lower percentage of mental diseases. In pulmonary and congenital diseases there was about the same percentage of difference in favor of the former. In all other particulars the difference amounted to as little as any such comparisons can. In the one hundred cases of those not related, seventeen per cent were sterile; in the cousins-german, fourteen and a half per cent. These figures agree very nearly with Huth's investigations. 5. The objections to cousins marrying, so far as there is an objection, is on the ground that very few families to-day are free from some tendency to weakness along some particular line; and it is equally true of these and of all marriages that heredity takes the line of least resistance. A marriage between two healthy cousins coming of a line free from any heredity defect is perhaps as fair as the average marriage. 6. But only carefully selected cases of first cousins should marry, and in no case where any hereditary, moral or physical defects exist. 7. The early objections to such marriages were on religious, not scientific, grounds. Notwithstanding this it is a significant fact that the Mosaic law permitted them.

Vaginal Examinations and Vaginal Douches in Normal Labor.

In the Medical Record, Sept. 17th, '98, Dr. Shears looks upon these measures with disfavor. The editor of the St. Louis Clinique comments on Dr. Shear's article as follows: Dr. Shears takes the ground that frequent examinations during labor are a frequent cause of infection through the unclean hands of the physician. This ground is well taken. He also claims that the douche administered before labor begins, or during its progress, washes away the normal protective vaginal secretions, leaving the membranes of vagina and uterus particularly susceptible to contagion. This is a rational view, since the absorptive capacity of these parts is certainly increased by the application of hot water. If a douche leaves the parts in a condition favorable to the absorption of germs, the digital examination is still more dangerous than when made while the surfaces are covered with their normal secretion. Then, again, his claim that these examinations are generally unnecessary is warranted by the fact that once the presentation is known frequent examinations retard, rather than hasten, the progress of the labor. Furthermore, that in multipara they are unnecessary, and that alone is sufficient reason for not making them.

The doctor also claims that douches after labor are still more injurious, as at this time many slight abrasions and lacerations may exist, and if the exuding blood serum be washed away these are more exposed to infection from without. If, then, the labor being normal, and no extensive lacerations causing hemorrhage have occurred, no excuse can be offered for making vaginal examinations, as the fingers of the examiner, and even the air entering the vagina, may carry the poison of infection.

These suggestions are exactly in line with the latest ideas regarding obstetrics, and should be heeded by those who are just entering upon the practice.

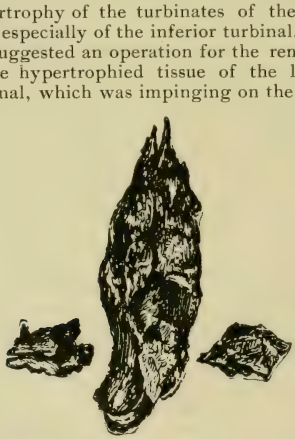
Rhinolith or Nasal Calculus.†

The pathological specimen I have the pleasure of exhibiting to you this evening is one of unusual interest, even to those of us who limit our practice to diseases of the eye, ear, nose, and throat, from the infrequency with which we meet these cases, and also from the circumstances which led up to its discovery, owing to the fact that it was situated somewhat differently from most cases of this kind.

Miss L. K., aged twenty-four years, from whose nose this was taken, consulted me January 1, 1898, regarding her nasal catarrh, with which she stated she had been afflicted ever since her childhood. Ten years ago she had been treated for about a year by one of the leading rhinologists of this city, receiving considerable benefit, but for the last two or three years she has had a rather profuse nasal discharge, thickened, and increasingly offensive in character, with obstruction to nasal respiration, loss of smell, nasal voice, and the other usual symptoms which we find in an aggravated case of chronic rhinitis. Lately she had suffered from headache, which was increasing in severity, and was also troubled with weeping of the left eye. She had been using an atomizer for some years without getting any other relief than the keeping of the nose approximately clean.

On making anterior and posterior rhinoscopic examination I found considerable hypertrophy of the turbinates of the left side, especially of the inferior turbinal.

I suggested an operation for the removal of the hypertrophied tissue of the lower turbinal, which was impinging on the floor



of the nose. This was agreed upon, and on Saturday, January 15th, I operated at 3 P. M. in the usual way, cocaining the parts thoroughly and making a practically painless operation.

Hæmorrhage was not very profuse and was readily controlled at this time. The patient returned home, and soon after suffered from an attack of nervous sick headache, to which she was subject upon occasions of nervous strain.

As usual, the headache ended with an attack of retching, after which straining the hæmorrhage started in afresh and rather profusely. I tried again to control it with styptics and plugging the naris with absorbent cotton, but did not succeed in thoroughly arresting the flow of blood, and, as the patient was getting very weak, with the kind assistance of Dr. Suttie, I tamponed through the posterior naris with a sponge tent, which instantly stopped the hæmorrhage. I then ordered her to be liberally supplied with beef extract, for the double purpose of nourishment and to increase the arterial tension.

Sunday, the next day, she was doing nicely, but was very weak; there was no recurrence of the hæmorrhage, but I did not think it advisable to remove the tampon as she was too weak to bear it.

Monday, January 17th, the patient was a little stronger, but owing to debility I could only remove a part of the tampon from the anterior naris.

The next two days I removed still more of the sponge anteriorly, in all about two thirds of it being removed up to this time, the patient being too weak to bear much manipulation.

On Thursday morning, January 20th, I attempted to remove the remainder posteriorly, but found it so firmly fixed that it could not be dislodged except with extreme force under anæsthesia. I called in Dr. Chittick and anæsthetized the patient, when, with considerable difficulty, we removed the remainder of the sponge.

After the patient recovered from the anæsthetic I cleansed the nasal cavity thoroughly with hydrozone, one part to twelve parts of lukewarm water, and she returned home rejoicing, the turbinal wound being in good condition, healing nicely.

Next morning she came to my office for treatment and stated she had enjoyed perfect freedom in breathing through that nostril until about four o'clock in the morning, when, changing her position in bed, that side became suddenly obstructed. After cleansing the nostril, which was seemingly full of an offensive discharge, I discovered this body, which was attached at the posterior end on the outer side of the inferior meatus, lying, as it were, in a groove or pocket.

†Abstract of a paper read before the Wayne County Medical Society, February 17, 1898, by William H. Poole, M. D.

The anterior or loose end of it was sharp like a spiculum of bone, and black in color; it was freely movable about its long axis,so that you could pass a cotton holder around it and lift it from its bed. After cocainizing, I grasped it with a dressing forceps and, giving it a twist, removed it. I then thoroughly cleansed and disinfected the cavity with the hydrozone solution, which removed the odor and rendered the cavity wholesome.

The next day the two smaller pieces were removed while cleansing and treating the nose. They were loose and seemed as though they had just scaled off from the bed where the larger pieces had lain.

The spraying of the nasal cavity with hydrozone, followed by the use of glycozone, constituted the treatment for the next four days, by which time the offensive odor had entirely disappeared, and the parts had assumed a healthy condition.

This concretion formed on the outer side of the inferior meatus, and as it grew larger it obstructed the flow of tears through the nasolacrymal canal, as evidenced by the overflow of tears from the left eye, which condition ceased immediately after removal of the rhinolith.

The secondary hæmorrhage was evidently due to a relaxation of the pressure on the vessels of the turbinate, owing to the calculus being disturbed in its position when the patient was retching.

As to the exciting cause of the formation in the case of this young lady, I could get only a negative history, there being no recollection of any foreign object having been put up the nose in her childhood. Being desirous of ascertaining, if possible, what served as a nucleus, and at the same time of finding out the composition of the formation, I cut it in two.

Microscopical examination reveals that it is composed of amorphous phosphates, undoubtedly the phosphates of calcium and sodium, which came from the tears.

There has been a marked improvement in the young lady's condition since the removal of the rhinolith; overflowing of the tears in the left eye has ceased, nasal respiration has become perfect, her voice has lost the nasal twang, and her general health improved rapidly, as indicated by the fact that she has gained four pounds in weight since the operation (four weeks ago,)and is still improving.

270 Woodward Avenue.

Foreign Bodies in the Bronchi.

Lendon (Therapeutic Gazette, Sept., 1898) reports a case of a boy, seven years old, who inhaled an ebonite shirt stud into his bronchus. Asphyxia immediately set in, and great distress lasted for ssveral hours. For three days pain was felt in the chest at a spot corresponding to the second right costal articulation.

During the following year the patient suffered from a constant cough and an attack of acute pneumonia which started with moderate hemoptysis, and finally with a purulent and offensive expectoration. At the end of the year it was noticed that no air entered the upper part of the right lung.

At the author's examination, fourteen months after the accident, there was great dyspnœa, constant coughing, profuse fetid expectoration, as much as half a pint being brought up in twenty-four hours. Hectic fever was also a symptom. One inch of the fourth rib was excised. Puncturing the lung did not show any collection of pus. Some pus was found in breaking up some adhesions between the middle and upper lobe, and the author believed that he felt the body, but it immediately disappeared.

During a fit of coughing, after the patient had recovered from the anesthesia, the stud was expectorated. For a few days after this fortunate accident marked dyspnœa was experienced, but the boy ultimately made a good recovery. As to prognosis, the author refers to the case of Dr. Gross, in which the foreign body remained in the bronchus for sixty years, but it is more likely to cause death in from one to five years.

Where septic symptoms exist it is justifiable to employ surgical exploration, but frequently the foreign body is not discovered and at times is expelled during a spasm of cough.

Trained Nurses and Doctors.

The following are a few editorial comments the New York Polyclinic recently made on the Trained Nurse and Doctors:

The actual number of trained nurses available, at least in New York City, who are worth their salt, is far below the demand. Nurses are born and not made, and few of them apparently are born. Their progenitors are, it would seem, stanch disciples of Malthus. If Dr. Schenck could only elaborate some method by which born nurses could be assured, he would confer a practical and desirable benefit upon suffering humanity, including the doctors. The really competent and "born" nurses, we believe, have no cause for complaint. The writer knows of at least three who are never idle except from choice. These three, it seems almost needless to say, are all women. Such a thing as a really good, thoroughly

satisfactory male nurse is almost an unknown quantity. Eunuchs are said to be capable of the highest possibilities in attainments as nurses. If this be so, then what we need in this country is a society for the propagation and cultivation of eunuchs.

Patients rarely, if ever, appreciate philanthropic economy in the doctor, even when they are the direct beneficiaries. As a matter of fact, based upon close personal observation, the successful physician here in New York is the man who "nurses" his cases, making his visits often and prolonging his attendance well along into the post-convalescent period.

When you happen to get a careless or incompetent nurse, blacklist her; when you get a good one, stick to her and see to it that she is kept busy. Make your own fees in proportion to the nurse's fees and the nurse's bill will not look so large. The size is a relative matter altogether.

General Infection Starting from the Tonsils.

This complication in tonsilitis is not as uncommon as is usually supposed. The British Medical Journal, October 22, 1898, gives details of a few illustrative cases published by Jessen. The first case was a man agsd 30, had a dirty greenish exudation on one tonsil from which the streptococcus and staphylococcus were alone obtained. This was followed by a characteristic erythema nodosum and severe pains in the joints. The fever gradually disappeared. The examination of the blood was negative. The case resembled a gangrenous diphtheria, but had no relation with it. 2. A woman, aged 28, was admitted comatose and died in twelve hours. Here there was no other source for the pyæmia except in the suppurative foci in both tonsils, which were obviously older than the lesions. 3. A girl, aged 17, suffered twelve days after the commencement of an angina, due to the streptococcus, from a strepto-coccal broncho-pneumonia, pericarditis, pleurisy, and nephritis. There was along with the stupor a roseolous eruption and hemorrhages. Recovery ensued. 4. A girl, aged 24, had a whitish-yellow exudation on both tonsils, and then developed signs of a diffuse broncho-pneumonia, pericarditis and general sepsis. The staphylo-coccus was found after death in all the diseased structures. Jessen draws attention to the fact that this case would run a risk of being classed as influenza. He emphasizes the fact that tonsils with a normal appearance may contain foci of suppuration. If an exudation appear on the tonsils, and then later small abscesses are found in their substance, it must be taken for granted that the microbes have penetrated from without. The author thinks that these cases giving rise to severe infections may be recognized as such, as the exudation is not situated in the lacunæ, but exists in long yellow or yellowish-white streaks, extending from above downwards over the tonsils. The treatment of these cases should consist in as continuous application to the tonsils as possible. Extirpation of ragged tonsils for prophylactic purposes is distinctly indicated. Bacteria causing chronic affections, such as tuberculosis, may penetrate through the tonsil, and the author gives illustrative cases. He emphasizes the necessity of attending to the tonsils in these cases. The adenoid tissue in the various tonsils is a more frequent starting point of general infections than is generally believed.

The Sense of Smell.

It is not a little curious that the sense of smell, which has in a few of the higher animals become of great importance should among ourselves be little used, never trained, and even associated with some contempt or disgust. In a recent issue of the British Medical Journal, the editor says that men differ much in their power of smell; few appreciate the delicious scent of agrimony on the one hand, and many well-to-do houses convict their owners of a singular obtuseness to stinks. There is irregularity too even among the gifted. Certain smells may be hardly perceived by a man who is acute for others, and one who is fastidious beyond the ordinary to detect the smell of putrefaction may be unable to recognise that of diabetes. The sense has also this mark of ancient descent, that it is the best remember ed and the worst recalled. Nothing perhaps brings back the past so vividly as a scent; its impression is firmly retained and the connections which it forms last long, yet when we smell a rose it is difficult to compare it with another flower, because we cannot recall at will the earlier scent. This durability, together with its imperfect subjection to the will, marks a faculty acquired and developed at a time when will was yet in its early stages. It is not like the unconscious perfection of skilled habit, for that is the result of effort and is the product of the past exercise of a highly developed will.

Yet for all its antiquity and for all its delicacy smell is no longer a trusted guide. The perfecting of sight has reduced it to a lower post, and we use it now not to point the road we should take but only the lodgings we should avoid. But Professor Ayr-

ton's suggestive address to the Section of Physics at the meeting of the British Association at Bristol last September shows that smell has begun to interest science, and that its laws, of which we know extremely little, may soon be observed. Professor Ayrton finds that in air the rate of diffusion varies much for different substances, but is slower than would be expected. The smell of camphor takes twenty minutes to permeate 7 inches of air in a glass tube. Smell is propagated more quickly upwards than downwards. *In vacuo* the rate of diffusion may be very greatly quickened, as in the case of camphor, whose smell traverses in one second a length of vacuum which, if filled with air, would have taken twenty minutes; but, on the other hand, the smell of some substances such as lavender can be propagated *in vacuo* with great slowness or not at all. The absorption of smell varies no less. For some smells lard, for others blotting-paper, for others wool is the best absorber. The clinging character of smell again varies independently of its intensity, and of its rate of diffusion. The elementary nature of the observations shows the novelty of the subject, and, as Professor Ayrton found in his own case, an initial difficulty consists in the imperfection of the human nose. He has been ousted by sight, and has become a *roi faineant* to whom no serious business is entrusted.

Yet though incompetent as a ruler, how charming as a companion! There is nothing save music to be compared in ecstasy with the scent of some flowers. And how valuable also as a warning! How far the degeneration of the sense of smell is due to the great prevalence of evil odours in cities it would be difficult to say, or how far the mere disuse owing to the greater reliance man has come to place on the sense of sight. The degeneration. however, must probably have taken place at a very early epoch in the history of man, for where he develops high powers as a tracker he does not rely, like the dog, on the sense of smell but on that of sight. The Australian aborigines, whose achievements in following a spoor almost pass belief, depend entirely on minute visual observation. They see all kinds of small indications which escape the less acute vision and the less trained observation of civilized man.

How far, again, the habitual use of tobaoco has blunted the sense of smell in the male civilized being is an interesting subject for speculation, perhaps for experiment. It is at any rate a matter of common observation that women have a more acute sense of smell than men. Many women can tell the clothes of one individual from another by the smell, while in men such a power must be extremely uncommon. Professor Ayrton in an early stage of his inquiry discovered that women were the best subjects for experiment, and most of his investigations were made with the assistance of ladies of his family. The physiological study of the sense of smell has been greatly neglected, and that of its pathological disorders is an almost unexplored field. Let us hope that Professor Ayrton's excursion will stimulate other explorers to follow in his footsteps.

Leprosy in Minnesota.

At the September meeting of the American Public Health Association, Dr. Braken read a paper with this title. He called attention to the following facts as emphasized by the records:

1. The impression that leprosy immigrants from the Scandinavian peninsula are all from Norway is a wrong one, as five of eleven lepers whose cases were placed on file by the board during 1897 and 1898 were from Sweden. 2. The feeling that physicians can quarantine against lepers by watching immigrants is an unsafe one. The family history of all immigrants from the country where leprosy prevails should be secured before they are allowed to embark for America, and no member of a leprous family should be permitted to land on our shores. 3. It would appear that the conditions antagonistic to the spread of leprosy in Minnesota are also opposed to sterility, as borne out by the families of several lepers, and some of these having had many children. 4. It is quite possible for leprosy to die out in certain favored sections of the country, such as Minnesota, without segregation, provided the importation of lepers is discontinued. 5. Even in Minnesota one has but to visit some of these lepers to feel that segregation should be insisted upon in all cases. One cannot but feel, on entering a filthy home and seeing a leprous mother careless in her habits, that the children are not safe. 6. Segregation in single States is not practicable. It tends simply to drive lepers from States enforcing such a practice to those that are not carrying out the system. 7. A Federal home should be provided for these unfortunates. They should thus be cared for more economically and more satisfactorily than through any State provision. 8. In spite of all precautions taken, there will be some leprous individuals in this part of the world for many years to come. The Scandinavian peninsula does not furnish all leprous individuals found in the United States.

Menstrual Troubles and Heart Disease.

The New York Medical Journal, Nov. 12, 1898, publishes an abstract of a paper by Guilmard, in which he demonstrates the influence of heart disease on the menstrual function, which influence has been denied. Mitral stenosis is found to be most often a cause of dysmenorrhœa, menorrhagia, and metrorrhagia. Next in order come mitral insufficiency and disease of the aorta. The author is said to have established the fact that menstrual troubles of cardiac origin are met with in more than half the cardiopathic patients, the cardaic trouble being first manifested at puberty. If the young girl is affected with simple mitral stenosis, which is the most frequent cardiac affection at this age, the lesion has in most cases remained unnoticed up to this time. The establishment of menstruation is difficult, and, according to Mathieu,there are often excessive losses, amounting to veritable metrorrhagia, with dysmenorrhagia. These symptoms commonly attract attention to the generative organs rather than to the heart, if there is not at the same time chlorosis. One should not therefore make a hasty diagnosis without carefully auscultating the heart. After some regular menstruations, or even at times after the first three, supervenes a period of several months of amenorrhagia, followed by a sanguineous flow, sometimes abundant, often scarcely appreciable, and of such irregularity that the girl does not know whether it corresponds to her period or not. During her entire sexual life,the cardiac sufferer is exposed to various accidents. Two conditions are essential to the production of hæmorrhage: First, a relatively good general health; and, secondly, a heart vigorous enough to wrestle successfully with the lesion. As soon as the heart begins to fail, and œdema and dypnœa appear,the patient falling into an asytolic condition, not only the hæmorrhages but the menses themselves are suppressed, giving place to amenorrhœa, to reappear later when the crisis of asystolia shall have passed and the heart shall have regained the upper hand.

It is difficult, according to the author, to state whether the menopause is modified by the existence of cardiac lesions. Duroziez's statistics, however, tend to show that the menopause is hastened when the mitral valve is involved, and is normal or retarded in all other cases, the retardation being especially remarkable in lesions of the aortic orifice. Moreover, cardiac patients are exposed at this period to considerable and repeated losses of blood, so that some time after the menopause metrorrhagias occur, influenced exclusively by a cardiac affection.

The conclusion drawn by the author is that whenever one finds menstrual irregularities whose cause is not obvious, auscultation of the heart should be practiced with great care; for while there may coexist uterine affections, the heart needs special attention. In short, metritis is at times the intermediary between cardiac influence and hæmorrhage, whether of alien origin or directly provoked by the cardiac lesion.

Variations in Pathogenic Activity Among Tubercle Bacili.

Dr. T. Smith (American Climatological Association, Sept. 1, '98). In the production of states of disease due to infection two main modifying factors should be recognized, the pathogenic activity or virulence of the infected individual.

The formation of races of bacteria endowed with different degrees of qualities of pathogenic power may be caused by prolonged parasitism upon different species, as illustrated by the tubercle bacilli of birds, cattle and man; to invasion of different types of individuals of the same race; and to continued vegetation in different organs of the body. Parasitism upon different species must obviously produce races of the widest differences. Such races are now recognizable among tubercle bacilli. Differrences in bacilli current among individuals of the same species may be so slight as to be not recognizable with our crude tests. Virulence is thus a sanction of resistance and the reverse is equally true. Both factors may slowly change with time, but for the short span of life of the individual they are practically fixed.

Variations in the pathogenic power as well as in minor physiological characters of bacteria have been encountered in nearly all important species carefully studied. Variations in virulence may also be artificially produced by passing bacteria through a long series of animals; variations in resistance, by processes of vaccination or immunization. The inoculation disease in such treated animals is usually modified in character.

Tubercle bacilli are no exception to the rule. Gradual changes may be noticed during artificial cultivation which express themselves by reduced virulence. Variations in virulence occurring spontaneously have been noted by Koch, Arloing and the writer. The latter has also found uniform pronounced differences in the pathogenic power of bovine and human bacilli sufficient to entitle each to the position of a race. The practical significance of minor variations occurring among human tubercle bacilli cannot at present be satisfactorily estimated, but needs further study.

The Tri-State Medical Society.

Owing to the political excitement throughout the country, especially in the Carolinas, the date for the permanent organization of the *Tri*-State Medical Society of North Carolina, South Carolina and Virginia, has been postponed from November 22d to some date hereafter to be named in January. We will announce the date in the next edition of the Journal.

The Result of a Single Test of the Virulency of Sputum Kept Many Months.

Dr. I. H. Hance, (Boston Medical and Surgical Journal, Nov. 17, '98) presented a paper with this title at the American Climatological Association:

He states that in February, 1896, he inoculated six guinea pigs with sputum which was secured from an old chronic case of pulmonary tuberculosis with large cavities. Eight weeks later all the animals being alive were killed; general tuberculosis of the glands and of the abdominal and thoracic organs were found in each pig.

Sputum which had been kept seventeen months in stoppered bottles in a box in a closet was thoroughly mixed in its own sediment and one and five-tenths cubic centimeters was inoculated into the peritoneum of one and under the skin of a second guinea pig. The former died in forty-eight hours of some septic poison; the latter lived thirty days, when he was killed. At the autopsy there was no glandular enlargement and no evidence of tuberculosis. On the same day two cubic centimetres of the sediment was mixed with two cubic centimetres of sterile water and centrifuged for ten minutes, thinking thereby to get the bodies of the tubercle bacilli without the toxin apparently present in the fluid. To this deposit in the tube, after decanting the supernatant fluid, two cubic centimetres of sterile water was again added and equal parts of this were injected into the groins of two guinea pigs. Twenty-eight days later both pigs were killed and the autopsy gave negative results. Neither of the pigs after the second experiment was at all sick after the inoculation. The microscopic examination of the centrifuged sediment did not show any clearly outlined bodies of the tubercle bacilli, but fragmentary masses which retained the coloring matter were pronounced to be tubercle bacilli by two other examiners besides the writer.

As the bacilli in this case were no longer viable Dr. Hance asks: Does sputum which remains in a liquid state for a long time develop toxins which are inimical to the life of the tubercle bacilli? Would the result have been different had the sputum been more virulent in its character, and taken from a case of acute active tuberculosis? If sputum dries more rapidly does it retain its virulency longer?

Treatment of Psoriasis and Eczema with Systematic Scarifications.

Jacquet (abstract in the Journal of the American Medical Association) has thus treated several hundred cases, but in his report restricts his description to eleven cases followed to date in the last two years. The success has been complete and permanent. The patches disappear without leaving a trace, a fact much appreciated by society women unable to appear decolletees previously, and artists whose hands had been affected. He only attempts this treatment in disfiguring, chronic, well-defined lesions, especially in psoriasis, after the failure of other methods. In eczema he finds the resistance to the desired effect increases progressively from the acute to the lichenoid form. He first softens the part with a permanent, soft potato cataplasm, not warm, frequently renewed, without antiseptics or oiled silk. The patient comes to the seance still "under the cataplasm." The scarifications are made in parallel lines, one to three millimeters apart, never crossed, in the superficial layer of the derma. The surface is allowed to bleed ad libitum, the bleeding promoted by tepid water. after which a folded piece of moist mull is applied and the patient returns to his cataplasm until the next seance. Six to sixteen are required. The scarifications are very slightly painful even to children.

Gonecystitis.

Dr. W. Ayers writes (N. Y. Medical Journal) of gonecystitis, and draws the following conclusions:

1. That gonecystitis occurs with about the same frequency as epididymitis; the acute form much more rarely than acute epididymitis; the chronic form more frequently than chronic epididymitis. 2. That, in my opinion, masturbation or sexual excesses cannot cause it, unless they have first produced a stricture in or near the bulb. 3. That stripping the vesicle is the only treatment that is of any service in chronic non-tuberculous and non-syphilitic gonecystitis. 4. That the vesicle can be reached and emptied in spite of the fact that it seems impossible from measurements made on the dissecting table. 4. That we have by this method a treatment whereby we are able to cure a large number of the so-called "incurable gleets."

The Relation of Malarial to Renal Disease.

We called attention to this relation between Malaria and Nephritis in a former issue of our Journal. Along this line the Journal of the American Medical Association editorially comments on this subject as follows:

The profession is coming to recognize more and more the interdependence in health and disease which exists between the various organs of the body, and that maladies which exert their primary and dominant influence upon one organ may simultaneously or consequently seriously derange another part far removed from the site of the early lesion. In no organs of the body is this interdependence of function better developed than in those which occupy the abdominal cavity, or lie in adjacent parts, and as a result of this we see secondary renal changes following diseases in the liver, the spleen and the intestinal canal in a considerable number of maladies. It is, however, particularly in those diseases which are called infectious that the kidneys are apt to suffer, for they are the organs by which the toxins or poisonous matters produced by the infecting micro-organism must be chiefly eliminated from the body, and it is for this reason, in all probability, that nephritis so frequently follows scarlet fever and other acute infections. As the years go by it becomes evident that primary renal disease is much less frequent than it was originally considered to be and more commonly it is recognized as a purely secondary affection.

In this connection recent studies which have been made concerning the influence of malarial infection upon the kidney are of very great interest, and it seems to be the universal experience of those who have made a careful study of malarial infection that albuminuria indicating renal difficulty due to malaria is exceedingly common. Thus Osler states that it occurred in 46.4 per cent. of the cases in his wards, and Thayer has recently shown that casts of the urinary tubules were found in 17.5 per cent. of the cases, indicating that there was a true inflammation of the kidney in these cases of the disease. Furthermore, he has also shown that in 1832 cases of nephritis, 26 were of malarial origin. In confirmation of these statistics Kerley has also reported the case of a child of 18 month who developed malarial nephritis, and he quotes Moncorvo's article, in which it is stated that in Rio Janeiro it is not rare to find children suffering from acute nephritis as the result of malarial poisoning.

Fruitnight has also reported similar cases, and it is evident that physicians called upon to treat malarial cases should carefully watch the state of the kidneys by a constant examination of the urine.

These facts are also interesting in connection with the well-known antagonism of many prominent practitioners to the use of quinin in malarial fever, associated with renal changes, and we believe that great caution is necessary concerning the use of this medicament, particularly when the kidneys are involved, first, because quinin in large doses acts as an irritant to the kidney, and second, because it has been found in cases where the kidneys were manifestly impaired that the drug seemed to produce serious renal complications. No less an authority than Koch, on his return from Africa, has asserted that the abuse of quinin in severe malarial infection of the estivo-autumnal type is responsible for many of the complications seen in the malignant forms of malarial fever in that country. It seems to be universally agreed that it is the estivo-autumnal parasite which most frequently produces nephritis. Yet this is the type in which the physician is most tempted to push the drug, as it is the least affected by ordinary doses of quinin. In other words, that form of malarial infection which, by its persistency, would lead to the use of large quantities of quinin also produces a condition of the kidney which makes the use of large doses of this drug of doubtful advantage.

Infantile Diarrhœa.

The treatment of infantile diarrhœa affords an example of the support given by the conclusions of bacteriologists to the observations of clinical observers, for both are agreed as to the utility of evacuants in the treatment of this disease. The diarrhœa is so urgent a symptom, and is apparently so intimately connected with the collapse from which the patients suffer, that the inclination too often is, at all risks, to stop this distressing condition. Experienced practitioners, however, have long preached castor oil or calomel rather than astringents, and the conclusions of bacteriologists point fully in the same direction. Dr. Ashby, opening a debate on "Summer Diarrhœa," at the Clinical Society of Manchester, said that it was the universal experience that a close, hot atmosphere maintained during the whole twenty-four hours, for days together, was the indirect cause of epidemics, of infantile diarrrhœa, the prolonged heat supplying the condition necessary for the increased growth and virulence of various organisms which are liable to find their way into commercial cow's milk. It is, however, by the toxins elaborated by these

micro-organisms, and their absorption into the blood, that the more serious symptoms —the fever, the depression of the heart, the suppression of the urine, the drowsiness, and the injurious effects upon all the tissues of the body—are produced, by which a fatal issue is so often ushered in. Locally, the toxalbumins set up an enteritis which chiefly affects the large bowel and lower end of the ileum, but it is the absorption of the toxins that is the cause of the more serious and fatal results. In regard to treatment, then, the first thing is the evacuation of the contents of the stomach and alimentary canal, so as to clear out the microbes and all their poisonous products. The vomiting which is so often present, is no doubt salutary, and may be assisted by warm water if the child will take it, or the stomach may be washed out. The latter proceeding is urgently called for in cases with no vomiting and with much collapse. Calomel is the best evacuant, and if there is no vomiting half a grain or one grain may be given and repeated once; but if there is much vomiting, so that an uncertain amount of the drug may be returned, small doses of one-sixth to one-tenth of a grain should be given and repeated every half hour. Meanwhile all milk must be stopped, and its place taken by barley water, white of egg in sugar water, chicken tea, or whey given in small quantities at a time. Brandy also may be given if required. So-called disinfectants to the intestinal canal have proved very disappointing, as indeed was only to be expected from what we know of the strength of disinfectants requisite to produce any effect upon micro-organisms outside the body. Far better is it to clear away the fermenting material, and for this purpose washing out the lower bowel is useful in addition to the use of drugs. To relieve griping and pain small doses of opium may be given, but their object is to act as sedatives and not to prevent the purging, an object for which they are too often wrongly used. If anything in the nature of a disinfectant is desired, bismuth nitrate in doses of five to fifteen grains every two or three hours is as useful as any.

Syphilis and Some Affections which Resemble It.

At the West Point meeting of the American Association of Genito-Urinary Surgeons, Dr. J. A. Fordyce read a paper on this subject. He stated that while, as a rule, syphilis reveals itself by clearly defined features and symptoms, cases are not infrequently met with which demand all the experience and knowledge of the expert to determine their true nature. It may be truthfully stated that no other condition, with the possible exception of tuberculosis, presents such widely diversified phenomena and such important relationship with both internal medicine and surgery. We cannot always appeal with success to the microscope to settle doubtful cases, even where the lesions are accessible to excision. We have fortunately in the therapeutice test a potent means of determining the nature of certain doubtful cases, but even here there are possibilities of error which occasionally confront us. While it is frequently possible to make a diagnosis of syphilis with the appearance of the initial sore, experience has taught me to be conservative in this respect, and generally advises the patient to await the development of positive signs of constitutional infection before beginning the use of mercury.

Error is more apt to arrise in the diagnosis of extragenital chancres, for the possibility of primary syphilis away from the genital organs is not always borne in mind by the practitioner. The doctor said he personally knew of several instances in which the primary sore of the lip and face was excised under the mistaken diagnosis of epithelioma, the subsequent development of constitutional symptoms rendering the character of the disease unmistakable.

In the diagnosis of the secondary stage of syphilis, the acute exanthemata, drug eruptions and a multitude of non-venereal eruptions may confuse the physician if all the concomitant symptoms are not given proper consideration. He recalled one instance where a patient with a small-pox eruption was admitted to one of our large city hospitals with the erroneous diagnosis of syphilis. The mistake was not discovered until the death of the patient and the outbreak of variola among a number of the exposed patients and hospital attendants.

The iodides in susceptible individuals sometimes produce pustular and ulcerative eruptions which simulate very closely the rupial lesions in syphilis, and as the iodides are employed to combat such an eruption, it is sometimes difficult to distinguish the one from the other.

In the so-called tertiary stage of syphilis the disease is again prone to localize itself, and can, in the skin, imitate tuberculous processes or malignant disease; in the subcutaneous tissues, new growths of malignant nature; in bone, tuberculosis or sarcoma; in the testes, tuberculosis or other neoplasms. Syphilis of the tongue is one of the most common antecedents of cancer of this organ, it being sometimes difficult to determine when syphilis ceases and when epithelioma begins.

Surgical Treatment of Insane Patients.

Dr. A. T. Hobbs (Amer. Jour. Surg. and Gyn., 1898, XI, 1-3) sets forth the advantages of operating upon insane patients and the great benefit following these operations. The results following 196 distinct operations on 110 women he gives as follows:

1. Of the 12 ovariotomies done, seven recovered, four improved and one died from complicating pneumonia on the twelfth day succeeding operation. 2. Out of 17 hysterectomies (of which 9 were vaginal and 8 abdominal) there recovered 5, 3 improved, and 2 died, one on the third day from exhaustion and the other on the seventeenth day from accidental hemorrhage induced by the patient herself. 3. The replacement of dislocated uterus was the operative treatment in 22 cases, either by the Alexander method or by ventro-fixation. Only 4 of this number have as yet recovered mentally, although 11 others have shown more or less mental improvement. 4. There were 30 cases in which the chief operation done was the removal of diseased cervixes. Of these, 12 are now well mentally, and 9 others have improved, a most gratifying record. 5. Of 21 cases in which minor uterine diseases were removed, usually by curetting, there recovered 12 and 2 improved—also a most satisfactory showing. 6. The remaining 8 cases embraced operations for vaginal lesions, fistula, etc. No mental recovery followed in any of these cases, and in only 3 was there any improvement observed.

Of the 110 cases reported, 36 per cent. were restored mentally, 29 per cent. showed an improved mental status, while in 29 per cent. the mental condition remained stationary and less than 3 per cent. died within a month succeeding the operation.

Clinical Notes of Asthma and its Treatment

Dr. B. Robinson, at the American Climatological Association, selected this subject for discussion:

He stated that the cases of nervous asthma so called, or asthma merely functional and without fixed causation, had been infrequently met with in his experience. The fact in the majority of cases there is probably a certain sensitiveness of the central or peripheral nervous system which accounts in a measure for the recurrence of attacks, but that despite the existing nervous irritability, the asthmatic attack would rarely occur were there not some other discoverable but as yet unknown cause. Malarial toxemia is frequently present but ignored. Malaria may be present causing slight enlargement of the spleen and liver, moderate secondary anemia, engorgement of the nasal, laryngeal or tracheal mucous membrane, or other parts of the upper or lower air tract, and yet be lost sight of, or its presence questioned or doubted. Microscopic examination of the blood in these obscure cases does not always give a satisfactory clue. If there is reason to suspect malaria in a case of asthma Fowler's solution should be given until the physiological effect is produced. If constipated and the liver is inactive Warburg's extract in doses of five grains three or four times daily. For the anemia, a pill containing one grain of reduced iron, two grains of muriate of quinine and one-sixtieth or one-thirtieth of a grain of arsenious acid. In an attack, belladonna, chloral or nitro-glycerin, and as a last resort chloroform inhalations or a hypodermic of morphine and atropine. The doctor believes in gout as an underlying cause in many cases. He related an interesting case in point, in which the cause was renal inadequacy due to gout, and in which the patient was restored to health by the use of three or four milligrammes daily of colchicine. Reflex causes are also to be removed.

For gastric catarrh, lavage and the use of Vichy or Vals water and an occasional mercurial purge are advised. Bronchitic and emphysematous types were referred to. Small doses of ipecac, tartar emetic, grindelia robusta, chloride of ammonium and iodide of potassium were used where the secretion is scant; when profuse, belladonna and atropine may be added to these, or pills of camphor and quinine may be given. For cardiac distention and accompanying symptoms nitro-glycerin and nitrites may be used, or soluble salts of caffein, such as the salycilate, or occasional bleeding will give relief. Nitrate of amyl was considered as dangerous. The time to give morphine injection was indicated and should be avoided if the pupils are contracted.

The Study of Hysteria in Childhood.

Dr. Herman B. Sheffield (New York Medical Journal, September 24th) concludes a paper as follows; 1. Hysteria is a neuropsychosis, manifesting itself in an array of functional disturbances of one or all of the higher centres (intellect, feeling, and will), with secondary changes in the lower ones, underlaid by a morbid condition of the nerve substance. Whether this defect lies in the neuron, in the nerve cell, in the nerve fibre, or in all of them, is a question as yet awaiting correct solution. 2. The etiology of hysteria in childhood is, like that in the adult, very obscure. Anything that lowers

the vitality of the patient serves as a predisposing cause. The role played by heridity as an etiological factor of hysteria is overestimated. Much more weight must be laid upon the acquired causes, among many of which imitation, faulty methods of education amd discipline, alcoholism in the young, and trauma are deserving of special mention. 3. Hysteria attacks boys as well as girls, the ratio being as one to two. It is comparatively rare in children under eight years of age, although youths eighteen years old are not exempt from it. 4. The symptomatology of hysteria is characteristic for its changeability and multiplicity. In the United States it is observed, as a rule, in the following order of frequency: (*a*) Spasmodic affections (convulsions, spasm of the laryngeal muscles—croup—contractures, catalepsy); (*b*) sensory symptoms (painful sensations, anæsthesia, blindness, contracture of visual field, hemianopsia, deafness); (*c*) motor disturbances (paralysis of the extremities, paralysis of the laryngeal muscles—aphonia); (*d*) visceral and vasomotor disturbances (affections of the alimentary canal, dyspnœa, tachypnœa, hyperpyrexia). 5. The treatment consists in removal of the causes, attention to general hygiene, isolation and rest, suggestion and hypnotism. The duration of this disease depends greatly upon the skill in treatment; the prognosis is, at all events, favorable.

The Bacteriological Diagnosis of Tubercle.

So much reliance is commonly placed on the ordinary methods of staining tubercle bacilli—for example, those of Gabbett or Ziehl-Neelson—that it is well to be reminded occasionally of an error which may occur more perhaps, than is supposed, in connection with these processes. The British Medical Journal states that last month Pappenheim recorded a case of bronchietasis, with broncho-pneumonia and gangrenous lung abscesses, in which a mistaken diagnosis of tuberculosis was arrived at, owing to the fact that the bacilli found in the sputum were indistinguishable, when stained by Gabbett's method, from those of that disease. They proved to be smegma bacilli. Commenting on this case, Fraenkel states that he has had several cases of gangrene of the lung, in which he made a similar mistake. He says that in ordinary mucopurulent sputum these bacilli do not resist decolorization, but that in all cases of decomposing sputum, rich in fatty acids and myelin, the ordinary methods are unreliable. Honsell stains with hot carbolfuchsin, and then places the preparation in a 3 per cent. solution of hydrochloric acid in absolute alcohol for not less than ten minutes, counterstaining with a solution of methylene blue in 50 per cent. alcohol. Fraenkel recommends this method. Pappenheim uses a solution of corallin in absolute alcohol. For details we must, however, refer the reader to Pappenheim's paper and to the references appended to it.

A Case of Gangrene of the Skin.

David T. Marshall, M. D., (Archives of Pediatrics, Feb., 1898), reports a case of this condition occurring in a five months old child. The child first came under observation the 20th of July. He was bottle-fed and lost weight persistently. Nine days after being first seen several nodular spots, having the appearance of mosquito bites, appeared beneath the skin. On the following day one of these spots, located in the mid-dorsal region just to the right of the vertebral column, showed a blackish center about the size of a split pea. Within six hours this had increased to the size of a cent and had a gangrenous appearance. It was surrounded by an area of inflammation extending to the size of a silver dollar. Encircling this area there was a narrow area, yellowish in color, having the appearance of pus. Beyond this the redness gradually faded. Six hours later there was a half-dozen such areas scattered over the body, the earlier ones being larger than the latter ones. There was a quite active fever. The child died within 48 hours of the beginning of the illness.

The autopsy showed fifteen spots of the nature described. There were five or six small nodules, from about the size of a pea to a hickory nut, scattered through the various portions of the lungs. These were yellowish in appearance on the surface and indurated. The ileum and colon were slightly congested, and the mesenteric glands slightly enlarged.

Agglutination of the Blood Corpuscles.

Elfstrand announces that the poisonous albuminoids—ricin, abrin and crotin—derived from the crotin seed, produce a marked agglutination of the red corpuscles. Ricin and abrin produce it in nearly every kind of blood, while crotin only effects certain kinds. Two drops of blood from two different animals, impossible to distinguish by macroscopic or chemic tests, can thus be readily differentiated with crotin; human blood and pig blood, for instance, which may prove important from a medico-legal point of view.—*Klin.-therap. Woch.*, September 11.

Pulmonary Tuberculosis in Children.

The British Medical Journal, Oct. 22, '98, publishes an analysis by Comby of 211 necropsies on children under two years of age with reference to the frequency of pulmonary tuberculosis. In 13.27 per cent. of these, tuberculosis under three months. Out of fifty-three children aged three to six months, 7.54 per cent. were affected; out of fifty-seven children aged six to twelve months, 22.80 per cent, and out of 29 children aged one to two years, 38 per cent. The figures contraindicate heredity as a cause of the disease, and point to contagion as the way in which the disease is acquired. The respiratory and not the gastro-intestinal tract is the path of infection. Caseation of the tracheobronchial glands was found every time in twenty-eight necropsies on children under two years. In twenty-one cases the lungs were tuberculous, in seven they were not; in seven cavities existed, even in children of four, six, or eight months. In the twenty-one cases of pulmonary phthisis eight had intestinal ulcerations, and 3 tuberculous ulcerations of the stomach. In twenty-four cases the following forms were made out: Ten cases of the apyretic variety with disseminated tubercles and pulmonary cavities, wasting diarrhœa and vomiting being the chief symptoms; twelve cases of a febrile type, with hyperpyrexia, accompanied by pneumonia, prostration, or a typhoid condition; two cases of the ulcerative variety, with fever, cough, sweating and clubbing of fingers. In children, miliary tuberculosis is more frequent than in adults. Measles, whooping cough, diphtheria, influenza, and pneumonia all predispose to the development of tubercle. In older children the same forms occur. The prognosis in young children is bad; the disease runs a rapid course, cavities forming in a few weeks and death ensuing in a few months in many cases. The prognosis in older children is much less grave, and cure is not rare.

Senile Uterine Catarrh.

J. Halliday Croom, M. D., (Edinburgh Medical Journal, April, 1898). There are three forms of this disease: 1. Those associated with fetid discharge and no hemorrhage. 2. Those associated with leucorrhœa and slight hemorrhage, and 3. Those in which hemorrhage is the main, if not the only, symptom. Post-climacteric hemorrhages are in the main due to (1) beginning cancer, or (2) the recrudescence of a fibroid, or (3) occasionally from a form of uterine catarrh with gouty endometritis as its cause. The symptoms are markedly like those of malignant disease. There are present vaginal irritation, general cachexia and emaciation, occasional rigors and night sweats, frequently pain in abdomen and back, and the discharge, which is watery and semi-purulent, and frequently contains a considerable amount of blood. True "flooding" is much rarer than in cancer. The odor of the discharge is usually offensive but not necessarily so. Examination shows the uterus slightly enlarged, or, at least, not normally atrophied, but not so large or fixed as in malignant disease. The introduction of the sound is very painful. The mucous membrane is hypertrophied, succulent and easily detached. Microscopic examination of a scraping shows inflammatory changes, infiltration of leucocytes. reduplication of cells and granular degenerations. Under appropriate remedies, senile uterine catarrh will rapidly improve, in a week or two, whereas this is of no avail in malignant disease. The diagnosis between this disease and primary fundal cancer is made by the slight, irregular and colicky pains; the early prominence of fetid discharge; the slight enlargement and mobility of the uterus and the absence of any neoplasm upon dilatation and examination of the uterus. The causes are uncertain but may be due to inflammation before the menopause, or a shrinking of the cervix with inflammation and retention, in the body of the uterus, causing colicky uterine pains. The great difficulty in the management of these cases is the differential diagnosis from malignant disease, but with due care this should be made. This condition is not prodromatic of cancer and never develops into cancer. The treatment is rest, hot douches; internally arsenic, strophanthus, and chian turpentine. Locally, applications of escharotics or curettage with packing and drainage.

Galvanic Treatment of Vomiting.

Apostoli at the French Society of Electrotherapy, read a paper on the galvanic treatment of vomiting and its best operative technic. His general conclusions were as follows:

1. Galvanization of the pneumogastric nerves, applied according to the rules formulated in 1882 and 1884 by Dr. Apostoli (which comprise the seat, the nature, the dose, the duration, the time, and the number of applications), is the most frequently successful means employed for vomiting of pregnancy and most gastric troubles of hysteria. 2. The best method of galvanization of the pneumogastrics is that which permits use of the maximum density of

current over the nerves, whether by placing the positive pole single or double over the nerve, or perferably by placing over each nerve an opposite pole. 3. The bipolar method of using the largest total of lines of galvanic current circulating from one pole to the other, is the method of choice, superior for rapidity and efficaciousness to the monopolar method which, having only one pole active (simple or divided), can,all other things being equal, use only the smallest electrical density or the feeblest total of lines of galvanic current. 4. The clinic has confirmed by sixteen years of Dr. Apostoli's practice the superiority of the bipolar method which he recommends and its incontestable advantages in the immediate symptomatic cure of the nervous troubles of the pneumogastric (vomiting, gastralgia, nausea.)

Acute Articular Rheumatism.

That acute articular rheumatism is a disease due to a specific micro-organism has been believed for a number of years, and in recent times several bacteria have been described, but apparently with little or no confirmation. One observer, however, would seem to have fared better, in that recently his claims have been substantiated by other investigators, and it may be hoped that the elusive cause of acute articular rheumatism is finally located.

As early as 1891, P. A. Achalme (Medical Record, Nov. 12, '98) announced that he had found the bacterium of acute articular rheumatism. For some reason or other he was unable to follow up his discovery with confirmatory proofs, and it was not until late in 1897 that he was enabled again to isolate the organism. He then published, in the "Annales de l'Institut Pasteur, 11, 1898, p. 845, "Recherches Bacteriologiques sur le Rheumatisme Aigu," a more detailed report concerning the bacterium in question. He describes it as an anærobic bacillus, which resembles in its general morphology the bacillus of anthrax. It is moderately motile, is colored readily with most of the aniline dyes, showing a capsule. It rarely forms spores, and when formed they are developed on the end. Its maximum growth takes place between 30 and 38 deg's. C., and temperatures below 25 or above 40 degrees C. limit or destroy its growth. One interesting fact relative to its biology is that when grown in urine it decomposes this, throwing down extensive deposits of urates. Following Achalme's publication, many bacteriologists claimed that he had isolated only one of the many anærobic bacteria which were commonly found in dead bodies, and were in reality bacteria of putrefaction. In a more recent communication, "Recherches sur l'Anatomie Pathologique de l'Endocardite Rheumatismal, Archives de Medecine Experimentelle et d'Anatomie Pathologique, 10, 1898, p. 370, he reports having found the organism again in two cases, and he controverts the statement that this bacillus is one of the putrefactive post-mortem anærobes. To verify this he examined thirty post mortem cases, and in no one was his organism found. Achalme, moreover, states that it was the exception rather than the rule to find the bacillus in the blood of patients suffering with the disease. Finally, in the Archives Russes de Pathologie, de Medecine Clinique et de Bacteriologie 5, 1898, p. 613, Sawthenkow completely confirms the researches of Achalme. He, in addition, shows that the organism elaborates negative chemotaxic substances and also products which produce necrosis in animal tissues. The characteristic endocardium lesions he believes to be due to these latter substances. Experiments made by him would seem to show that the action of sodium salicylate is due to the liberation of free salicylic acid.

The Prevention of Tuberculosis Through Food.

Although tuberculosis transmitted from animals to man by means of flesh, and more particularly of milk used as food, does not, as a rule, primarily affect the lungs, the prevention of consumption cannot be dissociated from that of tuberculosis in general.

The danger of drinking the milk of tuberculous cows, illustrated by the large amount of abdominal tuberculosis in young children, is fully proved by experimental investigations. Treatment, Oct. 13, '98, mentions the risk of using the flesh of tuberculous animals as food. The dangers may be minimized by attention to hygienic requirements in the sheds and quarters where the cattle are kept; by removing sources of infection—tuberculous cattle—from the herd; and by preventing the milk, and in some cases the flesh, of tuberculous animals from being sold for food. To ensure these points, inspection is necessary. Compensation should be given to those who willingly submit to inspection and its consequences, and penalties must be enforced on those who seek to evade their responsibilities. This entails much expenditure of public money, but it would not be difficult to prove that the present loss to the country by the high death-rate from tuberculosis amongst the younger members of the community costs the country more. Denmark, under the advice of Bang, took the lead in preventive

measures directed against the danger from tuberculous milk and food, and the communication of Bang to the French Congress of Tuberculosis (Brit. Med. Jour., Epitome, p. 26, August 13, 1898), gives many interesting and important facts. He sums up the "ideal prophylactic measures" as follows: (1) The recognition of all animals affected with tuberculosis, and their compulsory notification, followed by the examination of all beasts which have been exposed to contagion; (2) Destruction of all animals sufficiently diseased to be able to transmit the affection; (3) Complete isolation of animals slightly affected, which must be slaughtered as soon as the disease tends to develop itself in them.

It is in the details for carrying out these principles that difficulties present themselves, and it is the discussion of these details which furnishes the text for the numerous articles on the subject of the prevention of tuberculosis transmitted from animals to man.

Post-mortem Examinations.

The Hospital, Oct. 29, 1898, comments on this subject as follows:

Cultures, or preparations made for purposes of diagnosis, may be made after death either from localised lesions or, in the case of general infections, from the blood, or organs.

It is important that the examination should be made as soon after death as possible, for after the lapse of twenty-four or thirty-six hours the tissues are frequently found to be invaded by the bacillus coli, or other allied organisms, the growth of which may completely mask the existence of the organism which was the determining cause of death. This invasion of the tissues by bacillus coli is, we think, particularly frequent in cases of disease of the abdominal viscera. In localised suppurations, such as meningitis, pericarditis, or deep-seated abscesses, the method of examination is as follows: The abscess cavity should be opened with a knife that has previously been sterilised. A drop of pus is taken in the loop of a sterilised needle, and spread as thinly as possible over a series of cover-glasses, and fixed by passing through the flame. The films are subsequently stained and examined under the microscope.

When the cover-glass preparations are made the needle is again sterilised in the flame and a second drop of the pus inoculated upon the surface of culture tubes.

In taking cultures from the solid organs the most useful will generally be found to be the spleen and the heart, unless, indeed, the natrue of the disease should point to the more probable implication of some other viscus. The method most commonly employed consists in searing the surface of the organs with a knife or cautery, cutting through the burned area with a sterilised knife and then thrusting a sterilised platinum needle into the opening so made. An alternative method consists in sterilising the surface of the organ by soaking for half an hour in one in 1,000 perchloride of mercury, drying, cutting through the capsule with a sterilised knife, and then taking scrapings with the platinum needle or other available instrument. In either case smear preparations on coverslips are made, and then with fresh material tubes are inoculated. Such cultures taken after death are of especial service in confirming diagnosis in doubtful cases of pneumonia, pyæmia, septicæmia, enteric fever, diphtheria, etc.

Bromide of Strontium in the Treatment of Epilepsy.

Dr. A. Roche (The Hospital, Oct. 29, 1898) urges the use of bromide of strontium in epilepsy. He says that the strontium salt has an immense advantage over that of potassium, which has frequently produced serious physical and mental changes when continued for long periods. Moreover, patients taking bromide of potassium frequently suffer from intense depression, sometimes, in fact, asserting that they had rather suffer from the fits than from depression produced by the medicine. This consequence has not been noticed at all in the cases taking bromide of strontium. Dr. Roche has given three drachms daily for weeks without any unpleasant symptoms, and he considers that it excels the bromide of potassium in being more efficient; in not being followed by dangerous consequences when it is continued over a lengthened period; and in that, as it is not poisonous, it can be given in as large a dose as may be required to control the attacks. He usually commences the treatment by ordering half a drachm night and morning in some vegetable tonic infusion, and if that does not control the attacks he rapidly increases the dose till he has found the quantity which will suit the individual case. Where there is any warning of the attack he directs the patient to take 30 grains at once, and to repeat it every hour if required. Diet, however, is of much importance, and it is well that the patients should be restricted to fish and vegetables: although, when the attacks diminish in number, the more easily digested meats may be allowed twice or three times in the week.

Fracture of the Spine.

At the present day there is a growing tendency based upon the successful results that have followed operative procedure in suitable cases, to operate in cases of fracture of the spine. The Medical News, November 12, 1898, in its leading editorial, says that the class of suitable cases has been much widened by recent experience, so that it includes most of the fracture-dislocations, the fractures of the neural arch, hemorrhage, and secondary inflammatory exudate. Outside of this class there must remain the severer injuries to the cord from overflexion and direct crushing by bone, in which total paralysis is instantaneous, and complete division of the cord is the only explicable lesion. Operative interference will meet with most success in those cases in which the injuries involve the lumbar or lower dorsal region, and in which the operation of laminectomy is done immediately. Operative experience, furthermore, has demonstrated fully that cord degenerations from a continued pressure are rapid, and that the higher the injury and the seat of operation the greater the danger.

The difficulties and the uncertainties of diagnosis are many. The considerations presented to the surgeon by such a patient are, first, the symptoms of paralysis. Any surgeon with experience knows that he is doing his patient the greatest possible harm if he attempts to elicit the crepitus or the undue mobility. He knows that localized pain and loss of function may follow a mere sprain; and it is a fact that some of those cases which show almost no deformity are the, now frequently recognized, fractures of the laminæ which give best results from operative interference. Nor is he given great assistance in his decision by the nerve symptoms in view of the fact that the cord of an animal may be repaired after total division and certainly that of a man after hemisection. Furthermore, there are many reported cases where entire recovery or improvement has followed severe injuries to the spinal cord itself.

These points must lead to uncertainty as to the exact lesion present and in the light of the lessened danger from the operation, and the recent observations regarding the frequency of fracture of the neural arch there seems a justification for an exploratory operation in many of the cases. The experience of operators up to the present time has demonstrated beyond doubt that serious hemorrhage from the operation is not to be feared, that the loss of cerebro-spinal fluid is without consequence, and that the removal of the spinous processes and laminæ from a number of vertebræ does not materially weaken the stability of the vertebral column. Some subjects improve rapidly and are cured, in others the improvement is slow and never complete, while some show no improvement whatsoever. Yet even a small percentage of cures, or even of improvement is a sufficient justification for the operation, when a condition of actual pressure is relieved thereby; and this probability must be placed against a certainty that no improvement can follow a policy of non-interference. This probability of improvement gains force from the uncertainty that must always exist as to the extent of cord injury, and from the amount of repair that sometimes does follow a prompt removal of pressure. There are very few surgeons who would not advocate operation in a depressed fracture of the skull with cerebral symptoms. The indications for the operation under discussion must be the relief of pressure from bony parts, the evacuation of blood-clots causing pressure, the arrest of hemorrhage, and the correction of the deformity of the spine. The chief and practically the only indication is, in reality, the relief of pressure on the cord, to favor a re-establishment of function and oppose secondary ascending degeneration.

As previously stated these remarks apply more especially, to the lumbar and dorsal injuries, but there is no reason aside from the increased danger of operation why the same procedure may not be adopted in cervical fracture. The cervical region seems the one to which extension and manipulation is best adapted, yet this procedure possesses a forbidding danger to the patient from a possible sudden death during the manipulation. One reason for infrequent operation in former days was the conclusion that the crushing injury to the cord was, in most instances caused by the sharp upper border of the body of the lower vertebra. Facts opposed to this are a displacement, less extreme, in most cases, than was formerly supposed; the frequency of the fracture of the laminæ as a pressure and destructive cause; and that the removal of a lamina in a marked displacement has been followed by improvement.

Heredity in Relation to Mental Disease.

Farquharson, from a study of 1,200 cases of hereditary insanity, comes to the following conclusions (Boston Medical and Surgical Journal, Nov. 3, 1898):

1. Authorities vary greatly in the estimates they give of the frequency of hereditary predisposition in cases of insanity. In the Cumberland and Westmoreland Asylum 30.7 per cent. of all the cases admitted

showed a history of previous insanity in their families. 2. A history of insanity in relatives, whether in the direct line or collateral, may be deemed sufficient evidence of hereditary predisposition. It is not actual insanity that is transmitted, but an inherited flaw in the nervous organization. This may remain latent for one or more generations, and subsequently reappear. 3. Hereditary predisposition to insanity is strongest when it is inherited through both parents. 4. The maternal influence is very slightly more potent than the paternal in transmitting the tendency to insanity. 5. Insanity inherited through the father is slightly more dangerous to the sons than to the daughters; insanity inherited through the mother is markedly more dangerous to the daughters than to the sons. 6. The female sex is markedly more liable to suffer from hereditary insanity than is the male. 7. The order of sequence of the different forms of mental disease amongst the cases admitted into Garlands Asylum, as regards the frequency of hereditary predisposition which they exhibit, has been as follows: 1. Congenitai imbecility. 2. Melancholia. 3. Mania. 4. Epileptic insanity. 5. Dementia. 6. General paralysis. 8. The suicidal impulse is very frequently present in cases of hereditary insanity. 9. Suicide and dipsomania have a marked tendency to be transmitted unchanged from one generation to another. 10. In most cases, however, the form of insanity in the descendants shows great variations from that which occurred in the ancestors, and different members of the same family or generation may exhibit widely different varieties of mental disease or other nervous disorder. Insanity, the tendency to which is inherited, may have been preceded in the family not by actual insanity, but by other forms of nervous disease. 11. In successive generations the propensity to mental disease may become gradually intensified; finally a state of amentia is produced, with a tendency to bring about extinction of the family. On the other hand, the tendency to mental disease may become gradually eliminated in the course of generations. 12. The origin of hereditary neuroses in a family can some times be traced to alcoholic excess in the ancestors. 13. Hereditary predisposition to insanity in a family is frequently associated with the tubercular diathesis. 14. The exciting causes of attacks of insanity seem on the whole to be of much the same nature in the hereditarily predisposed as in those without predisposition. 15. Hereditary insanity is specially prone to show itself at critical periods of life; thus puerperal insanity is proportionately more frequent in the hereditarily predisposed than in those without predisposition. 16. Relapses are more frequent in cases of hereditary insanity than in non-hereditary cases. 17. Hereditary cases are apt to suffer somewhat earlier in life than non-hereditary cases. 18. Attacks of hereditary insanity may come on at any period of life. Even in senile insanity the proportion of hereditary cases does not fall very far short of the proportion existing in cases at all ages combined. 19. Hereditary insanity frequently makes its appearance at about the same period of life in successive generations. When the taint is becoming intensified it tends to make its appearance at an earlier age in each succeeding generation; and, conversely, when the taint is becoming eliminated it tends to appear later in life in each succeeding generation. 20. The proportion of unmarried persons is considerably higher amougst those suffering from hereditary insanity than amongst those without predisposition. 21. The recovery rate in hereditary cases of insanity is considerably higher than in non-hereditary cases. 22. The death-rate is lower in hereditary than in non-hereditary cases. 23. The duration of life is somewhat shorter in those suffering from hereditary insanity than it is in the insane generally. 24. A large proportion of deaths from tubercular diseases occurs in cases of hereditary insanity than in non-hereditary cases. 25. The duration of the attack in hereditary cases that recover does not seem to differ very much from that in non-hereditary cases.

Fever from Coitus During the Puerperium.

In a recent issue of Woman's Medical Journal Dr F. H. Lee reports a case of this character. The case referred to was a V-para in whom each confinement had been followed by chills and fever about the fifth day. In the confinement for which Dr. Lee attended the patient the temperature and pulse were normal until the fifth day, when the patient began having chills in the morning. The temperature was 103.5 deg., the expression anxious, the abdomen slightly distended and tender, and the patient complained of headache. On inquiry it was ascertained that the patient had had coitus on the night of the third and the morning and night of the fourth day—thrice in thirty-six hours. Interdiction of coitus reduced the temperature, and the patient made a good recovery thirteen days after confinement. On inquiry it was ascertained that coitus had been indulged in on the third and fourth days after each confinement, the chills and fever following.

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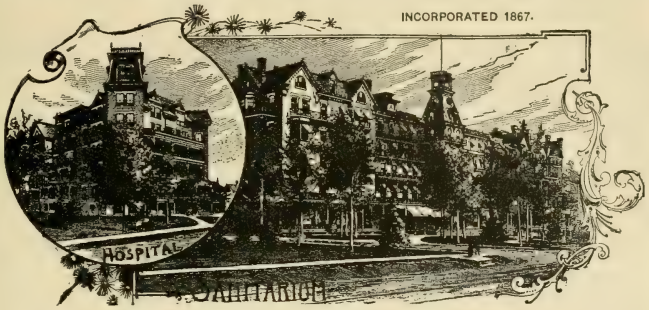

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Don'ts in the Treatment of Pneumonia.

Dr. Mayo (Medical Record) says: Don't think that you can get as good results from a tub bath or from cold general spongings, as you can from the local application of ice. Don't become alarmed when the ice produces a sudden drop in the temperature and think the patient is going to collapse. Don't fail to retain the ice as long as fever is present and resolution has not taken place. Don't omit to apply one or two ice bags to the head. Don't overlook the beneficial influence of strychnine in combating pneumonia. Administer one-twentieth of a grain by the mouth every 3 or 4 hours, and besides give the same dose hypodermically once or twice a day until the system becomes irritable. Don't omit the hypodermic injection of one-fourth of a grain of morphine once or twice a day to secure rest and sleep. Don't fail to administer oxygen by inhalation more or less constantly if the patient is cyanotic or short of breath. Don't fail to bleed, if cyanosis and dyspnœa are not relieved by oxygen inhalation. Don't lose sight of the great value of tincture of capsicum in relieving great nervous depression; delirium; dry, black, coated tongue; picking at the bed clothes, etc. Give it in from a half to one teaspoonful doses in water, every two or three hours, or oftener, in alcoholic pneumonia. Don't fail to give sodium salicylate, ammonium acetate, and potassium citrate, three grains of each, in a dessertspoonful of peppermint water, every three or four hours, if there is the least evidence of a rheumatic complication. Don't overlook the important action of quinine in this disease.

Typhoid Fever in Chicago.

Chicago has for the past few months been again suffering a scourge of typhoid fever. The last serious outbreak occurred in 1892, continuing for a year or two. The present epidemic is, it seems, not of a particulary severe type, but there are many cases. There can be no question whatever that the pollution of the water supply is the existence and continuance of the disease. While this is universally known among the people, and they have time and again, through the public press, been warned against drinking the city water, unless after it had been thoroughly boiled, they still persist in disobedience of the injunction, and the consequences of sickness follow. Aside from this typhoid outbreak the city has been especially free from contagious diseases.

Neuritis from Ingestion of Putrefying Pork.

Dr. W. G. Spiller, in the Philadelphia Polyclinic, Sept. 24th, 1898, relates a case of this kind in which he attributes the cause of the symptoms to putrefying pork.

The patient, a man of 62 years, suffered from acute gastro-enteritis, the result of eating pork which was probably tainted. The gastro-intestinal symptoms improved after a few days, and the man left the hospital, but dizziness was complained of, and became so severe that he at times fell, once even losing consciousness, according to his statement. In the early part of his illness he suffered from disturbance of sensation in the hands and feet. The extremities felt "as if asleep," and the feet pained when he walked on them. In the hands the pain was not distinctly felt, but numbness in the ends of the fingers was the cause of much annoyance. The numbness in the lower extremities was especially felt on the plantar surface of the feet. He complained of a sensation of cold in the upper limbs from the elbows to the fingers, and in the lower limbs from the knees to the toes. Objective sensation in the hands and forearms, feet and legs below the knees was somewhat diminished in intensity. At times the feet and hands were swollen.

The patient suffered from distinct muscular weakness. The grasp of the hand was not as strong as one would expect in a man who had been a day laborer all his life. He was unable to walk far, and had difficulty in ascending and descending stairs. The knee-jerks were much diminished in intensity. Vesical and rectal symptoms were not noted.

Any slight wound which was received in the extremities healed with much difficulty. Small hemorrhagic spots were quite numerous over the thighs and legs. No tender areas along the spine, suggestive of meningitis, could be found. During two months the condition of the extremities remained nearly unaltered.

READING NOTICES.

The Prevention of Sore Nipples.

Milton J. Mabbott, M. D., (New York Medical Journal, Sept. 10, 1898) remarks: It is a favorable sign of the times that it is becoming fashionable for a mother to nurse her own child. Maternal lactation went out of fashion, it is fair to presume, partly because of the suffering involved, resulting largely from sore nipples. The mother in

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many instances endured the pain for two or three weeks only to find that after all her sufferings she lost her milk, or its quality had depreciated as a natural consequence of her own increasing neurasthenia. In occasional instances the sore nipples led up directly to mastitis, requiring incision and numerous dressings, with all their additional shock and suffering. The woman who had not experienced this martyrdom knew of some one else who had, and is it any wonder if she preferred to have her baby nursed in some other manner, even at some risk to the baby?

The treatmnt of sore nipples is more successful than formerly. The prevention of mastitis, or its cure without suppuration when seen early, may be so uniformly accomplished in these days that certain practitioners are careless in regard to the nipples prior to lactation. A friend of mine recently read a paper on the treatment of sore nipples and mastitis, based on a large experience, and in the discussion expressed the opinion that preparatory treatment of the nipples was scarcely worth while. But a large experience with sore nipples spoke volumes to the contrary. How much suffering might have been escaped! In how many instances might the secretion of milk have been preserved! How many infant lives, ultimately lost, might have been saved?

From the foregoing I do not wish to have it inferred that I am ignorant of the fact that text-books and journals are not silent on this subject. I merely wish to emphasize its importance, and particularly to present a simple and efficacious method which has proved usually successful in my practice—I may say unusually successful, for I have seen less gratifying results from other methods. The method is based upon suggestions made to me some years ago by Dr. E. L. Partridge. It is so successful that recently I have used no other, and it is to this method only that I desire to draw attention. I refer to the use of Lanoline and a nailbrush.

Lanoline, as is well known, is simply sheep's wool fat mixed with a small percentage of water. It is official under the name of adeps lanæ hydrosus, and is well described in Potter's Materia Medica. The article manufactured by the process of Liebreich is the preparation usually dispensed. My regular prescription is as follows:

℞ Lanoline (Liebreich) ℥j

Dispense in glass or porcelain screw-cap jar.

Sig.: For external use every night.

The patient is instructed to begin its use from four to six weeks before the expected date of confinement and continue until delivery. Every night at bedtime a small portion of Lanoline is thoroughly worked into each nipple with the thumb and fingers, special pains being taken to rub it well into any folds or crevices, especially in the case of depressed or sunken nipples. This kneading process has the effect of forming the nipple—partly by pulling it out, and partly by causing erection—and this in itself develops the nipple and promotes facility of nursing. I consider Lanoline superior to other substances which might be used for this purpose by reason of its combined adhesive and penetrative qualities, promoting the nutrition of the epidermis. However, perhaps the most useful purpose of the Lanoline is associated with its moral effect in furnishing a substance to remove in the morning by the second and more important step of the treatment. Lanoline resists saponification and requires considerable time for its removal.

The nailbrush should be soft and well soaked. A harsh brush at the beginning would have the effect of a file. It is desired to avoid causing abrasion at any time. If soreness is produced, the treatment has been too heroic. The nipple should be brushed with lukewarm water and any mild, pure soap (preferably a white soap), giving it a thorough lathering for three or four minutes. It should afterward be rinsed with fresh water and dried as after ordinary bathing. The effect of this treatment is to remove every detachable fragment of epithelium, together with any little crusts of dried secretion which may possibly have accumulated, and which, unless removed, act as a protection to the surface of the nipple and keep it tender and delicate.

The treatment here described exposes the surface not only to the friction of the brush, but also of the fingers in applying the Lanoline, and still further to the contact and more or less rubbing of the clothing during the day. All these agencies combined, secured in so simple a manner, develop the cuticle, render it firm, elastic and resisting and produce a useful nipple which may be almost guaranteed against subsequent abrasions and tenderness. No woman should consider it too troublesome, in view of the suffering and dangers which thus may be averted.

Wet Dressings in Surgery.†

This may well be called the dressing period in the evolution of surgery. Time

†Dr. T. O. Summers in Journal American Medical Association.

was when the scapel alone was emblazoned on the escutcheon of the surgeon and with the skilful incision his responsibility ended, nor did the dignity of his office admit of his performing what were then held as the minor and menial offices of after treatment which then was supposed to cover everything that followed upon the first brilliant sweep of the surgeon's glittering steel. There are no doubt some who hear me today who remember the dramatic toss of the knife behind him of the elder Gross when completing his incision and the autocratic delivery of the case of his assistants for the dressing and treatment of the wound.

Even to this day the red, white and blue stripes of the barber pole tells of surgery's humble origin and the bandagers and the bone setters still roam through the villages of England and the barber surgeons still apply the leech and cup for the more dignified practitioner. It remained for Sir Joseph Lister to break the spell of this *otium cum dignitate* which was the bane of all surgical progress and teach the autocrats of the scapel that surgery meant much more to the organism than the mere solution of continuity along anatomical lines—and this indeed was the *avant coureur* of the real principile from which all the almost miraculous achievements of modern surgery had been evolved. It was my privilege to be present at the presentation to the British Association, at Edinburg, in 1875, by Professor Lister for the first time of a clinical demonstration of his mode of surgical dressing whieh opened to surgery new worlds to conquer. The case was one of litgation of the external iliac and the elaborate dressings being removed proved the triumph of his principle through his venerable colleague, Professor Spence, almost on the verge of eternity, threw a well poised Parthian lance at the rising genius of modern surgery. Since that day every operation, however simple in itself, has been one in which the surgeon "earned his bread by the sweat of his brow." No turning over the case to the unwashed students, for he whose records of success are proclaimed to-day is the operator who leaves not his patient until the last jot and tittle of aspect dressing has been fulfilled for so exacting is this principle that *falsus in uno, falsus in omno* is the inflexible law of its operation.

As a matter of course with the increase of such labor necessary as it has proved to be to insure surgical success, the ingenuity of man was set to work at once to simplify the methods without impairing the efficiency of aseptic surgery. So active has been the work in the field that apparatus of every device and design has been offered to the profession until its name is legion and of making of dressings as the patriarch said of books, "there is no end." As in everything else the elements of "faddism" or surgical "fashion" has been dominant even in this unesthetic field, and the very men who pretend above all others to condemn the follies of feminine fashion are themselves afraid to say their soul is their own when it comes to operating and dressing of wounds before their lynx-eyed professional rivals. For years past, for example, it had been almost as much as a surgeon's name was worth to apply oleaginous preparations to surface lesions although the very first treatment of wounds of which we read recommends the "pouring of oil" and in case of the good Samaritan received the endorsement of the Great Physician himself.

There are some things, however, that fashion cannot forbid, and this is one of them—like Banquo's ghost "it will not down." Long before science had thrown its searchlight over the dark field of biogenesis, experience had taught the steel clad warrior the virtues of Gilead's balm and from the shades of Olivet where fell the tears of Him who came for the healing of the nations, man had learned to gather the oil of his wounded body. Since the discovery of the bacteriologic processes of infection in open wounds, there has been a gradually growing tendency to return to the ancient remedial agents which experience dogmatically taught were rationally indicated. In the last edition of that eminently practical work upon surgery by Wyeth, of New York, we find this positive and significant utterance upon the use of oil and balsam, the first surgical dressings known to humanity: "I know of nothing equal to this valuable preparation. The oil acts in a twofold way—the surface of the wound is moistened by it, while the liquid excretion from the wounded surface is carried off in the dressing by capillary attraction. The removal of moisture cripples the proliferation of the bacteria and in this way aids in antisepsis."

In the process of repair, all the structural elements must be supplied from beneath the surface of the lesions so that the constructive metabolism would not be injured by the mechanical interference of the oil globules which as intimated in the quotation just made "would cripple the proliferation of bacteria" which comes from without. There are many wet dressings which if frequently renewed show excellent results, but there are few cases which come before us in which disturbance of dressing does not do

mechanical injury to the process of repair, besides exposing the wound to the entrance of pyogenic and other cocci while the dressing is being changed, while the retention of material which has expended its aseptic influence is a constant menace to the integrity of the organism at large. Lister was working to the overcoming of these difficulties when he devised his "paste" dressing which, however, failed to meet the desired ends in many cases. The use of animal and vegetable oils is also open to the objection offered to solutions in dressings—the necessity of changing the dressing too often—but for a different reason, the tendency of the oils to become rancid and this applies also to the keeping of such dressings prepared for use. Wyeth recommends in his oil and balsam dressing the sterilization of the oil before using, but admits that this is often impracticable and recommends in this case the use of plain cold castor oil of the shops.

It is therefore clear that to carry out the idea of a practical dressing it must be:

1. Antiseptic. This applies not only to the effect of the application to the part effected, but to the corporate substance itself thus insuring it against auto-infection before applying.

2. Permanent. This is necessary in order to avoid too frequent removals as well as to preserve itself from deterioration.

3. Non-irritating. There is nothing more delicate, more easily disturbed than the formative principles of tissue so that care must be taken in the dressing of all lesions of surface lest the agents used should arrest the tender process of repair, as well as protect it from the destructive germs.

4. Constructive. While the majority of lesions, especially those of traumatic origin if not interfered with by destructive germs will heal rapidly of themselves, there are very many which require not only this negative condition, but also a positive stimulation of function in the constructive elements of the part. Stimulation of cell growth, however, must not go to the extent of irritation in which case there will be destruction instead of construction of tissue.

The fulfillment of these conditions has been the aim of the surgical pharmacist from the time when the first coccus wriggled across the field of the microscope and gave its first exhibition to the scientific investigator of its dance of death within the organism of man. But amid all of this elaboration of apparatus it was to Sir Astley Cooper after all that the credit is due, for his foreseeing therapy leaping over as it were the dark chasm which separated the triumphs of his surgical genius from the science illumined land of modern surgical pathology. It was he who without the knowledge of the bacteriologic factor in the great problem of surgical treatment, by the intuition of genius gave to us the essential principles of external dressing for surface lesions. His formula, however, was open to the objection of violating one of the conditions herein laid down—that the permanence—in that lard was used instead of petrolatum which has been since discovered and is now substituted in the preparation known as Unguentine, which is an ideal formula constructed along the lines of that suggested by Sir Astley Cooper, but altered to the conditions of modern aseptic surgery. The irritating effects of the ordinary alum has also in some way been obviated, furuishing thus a typical dressing for surface lesions. For internal lesions that are to be immediately and permanently closed beneath the suture integument there are many valuable aseptic liquid preparations which we prefer to the too indiscriminate use of iodoform, *et id omne genus*, but we are free to admit that for all external dressings we have found the highest fulfillment of modern aseptic or antiseptic surgery in the preparation just mentioned.

I am not sure whether this is a proprietary preparation or not, but this I do know, its formula is an ideal one and its results are certainly very satisfactory. It is about time we were looking around after labor saving methods when we have to employ at the simplest incisive operations an extra attendant to wipe the sweat from our brows as the hours fans the Sultan's headed cheek —though our attendants are not all houris, nor are our cheeks fired with the congestion of a lazy passion. We are glad to see this unholy war against oleaginous applications coming to an end, just as we should be also glad to see the phlebotomy pendulum point to the nadir. In surgical politics I am a middle of the road man—*In medio tutissimus ibis.*

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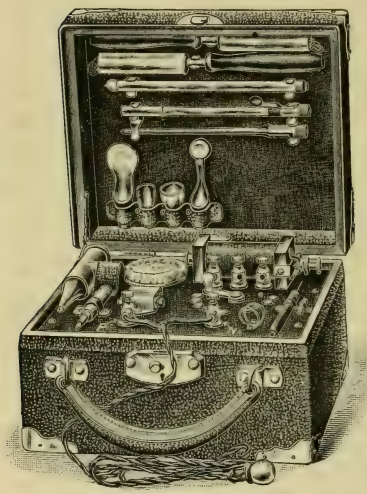

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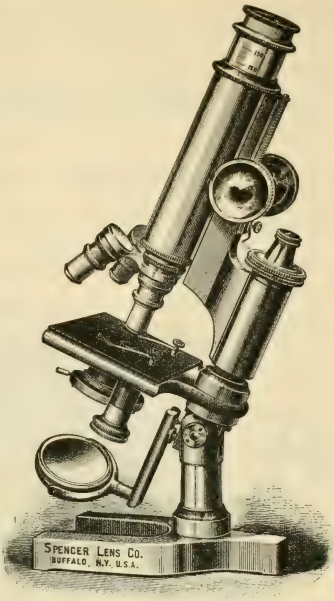

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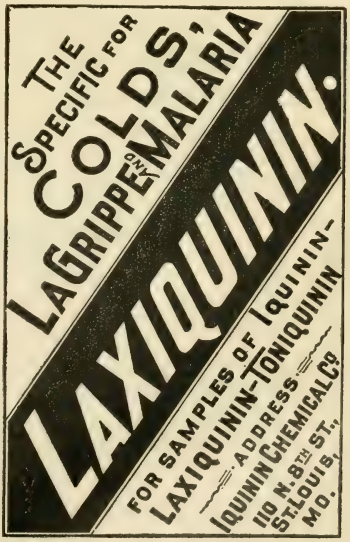
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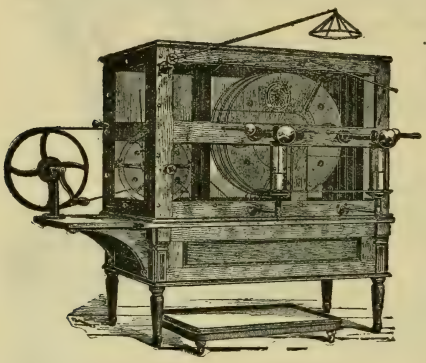

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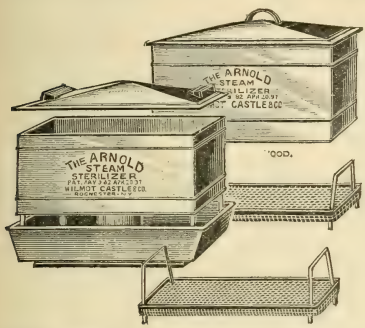

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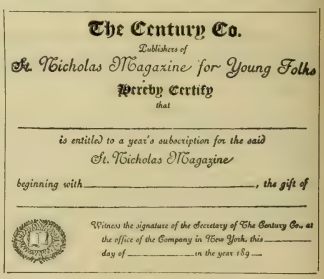
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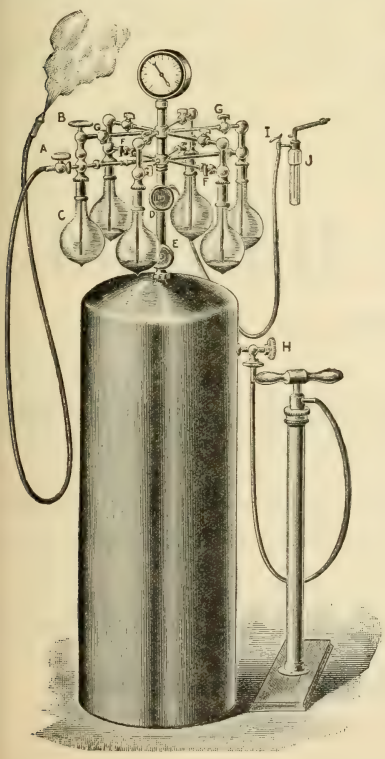

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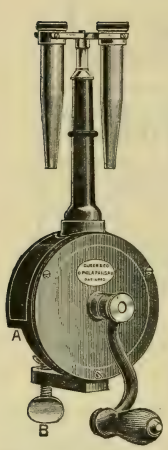

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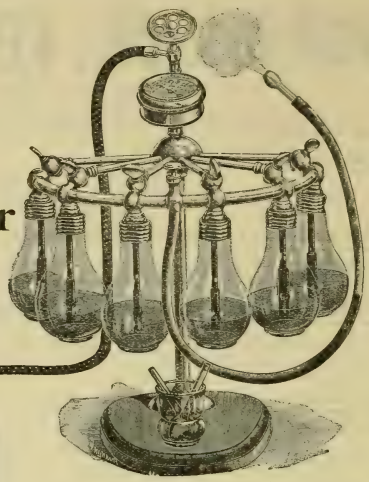

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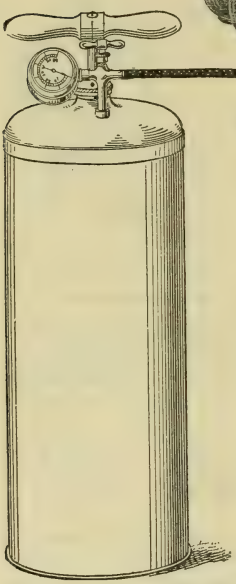

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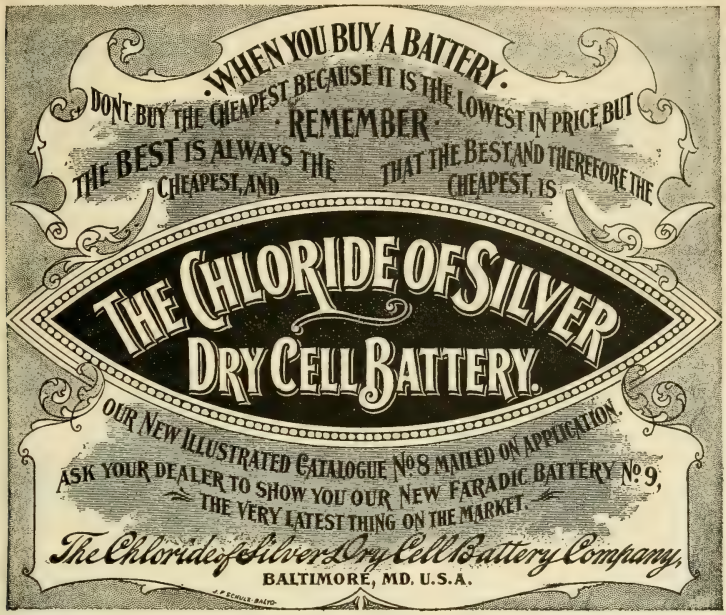
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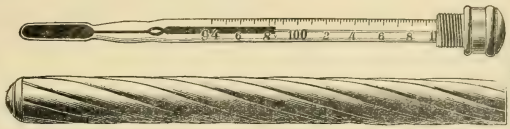

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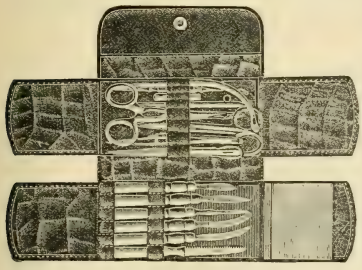

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Lv. Charlotte,	S. A. L.	*7 50am	*10 25pm
Ar. Clinton.	"	*9 45am	*12 14am
Ar. Abbeville,	"	11 03am	1 35am
Ar. Athens,	"	1 13pm	3 43am
Ar. Atlanta,	(Central time)	2 50pm	5 20am

NORTHBOUND.

		No. 492.	No. 38.
Lv. Charlotte,	S. A. L.	10 25am	*7 50am
Lv. Monroe,	"	*9 40pm	*6 05am
Lv. Hamlet,	"	*11 15pm	8 00am
Ar. Wilmington,	"	.....	*12 05pm
Lv. Raleigh,	"	*2 16am	*11 25am
Ar. Henderson,	"	3 28am	*12 57pm
Ar. Weldon,	"	*4 55am	*2 45pm
Ar. Richmond,	A. C. L.	8 20am	7 34pm
Ar. Washington.	Penn. R. R.	12 31pm	1 30pm
Ar. Baltimore,	"	1 46pm	10 08am
Ar. Philadelphia,	"	3 50pm	3 50am
Ar. New York,	"	*6 23pm	*6 53am
Ar. Portsmouth,	S. A. L.	7 25am	5 20pm
Ar. Norfolk,	"	*7 35am	*5 35pm

* Daily.

WESTWARD.

	No. 41.	No. 403.
Lv. Charlotte	10 25pm	7 50am
Ar. Mt. Holly		9 45am
Ar. Lincolnton		10 35am
Ar. Shelby		11 37am
Ar. Ellenboro		12 15pm
Ar. Rutherfordton		12 50pm

†8 40am Lv. ..... Hamlet ..... Ar. 6 20pm
10 00am Ar. ..... Cheraw ..... Lv. †5 00pm

EASTWARD.

	No. 38.	No. 402.
Lv. Charlotte	*5 10am	8 28pm
Ar. Monroe	5 55am	9 10pm
Lv. Monroe	6 05am	9 40pm
Lv. Marshville	6 25am	.....
Lv. Wadesboro	7 01am	10 31pm
Lv. Rockingham	7 41am	11 05pm
Ar. Hamlet	7 55am	11 23pm
Lv. Hamlet	8 20am	.....
Lv. Laurinburg	8 46am	.....
Lv. Maxton	9 05am	.....
Lv. Lumberton	9 53am	.....
Ar. Wilmington	12 05pm	.....

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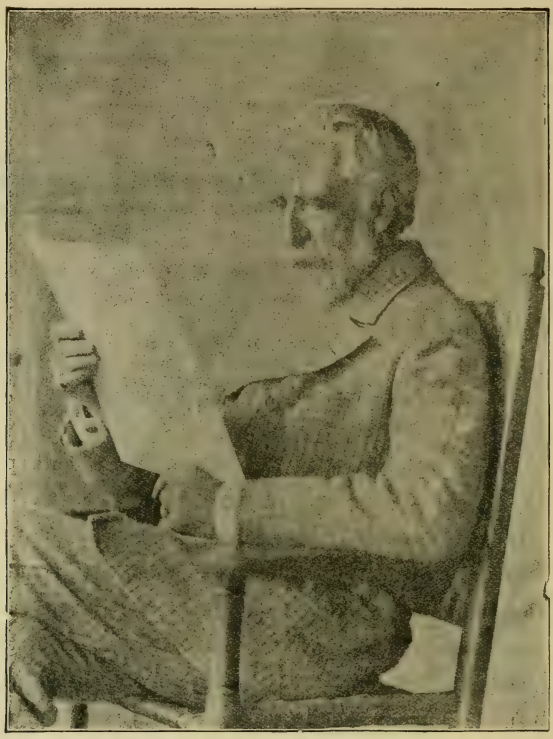

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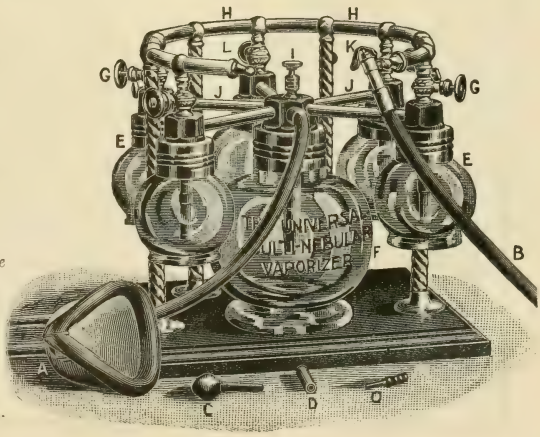

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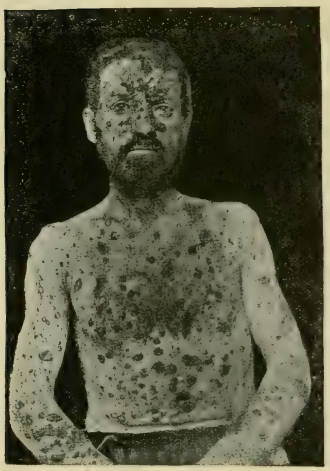

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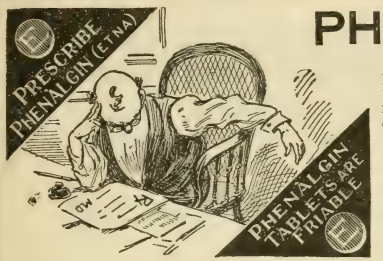

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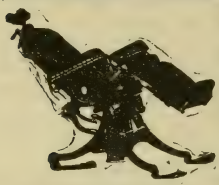

Fig. V.—Semi-Reclining.

1st. Raised by foot and lowered by automatic device.—Fig. I.
2d. Raising and lowering without revolving the upper part of the chair.—Fig VII.
3d. Obtaining height of 39½ inches.—Fig. VII.
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Fig. XVII—Dorsal Position.

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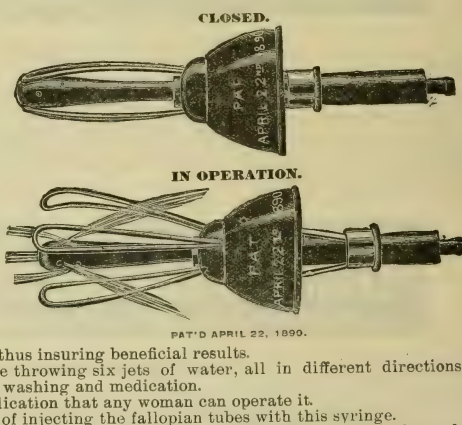

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The Charlotte Medical Journal.

Vol. XIII. CHARLOTTE, N. C., DECEMBER, 1898. No. 6.

Urethral Hyperæsthesia,

Written at the request of The Charlotte Medical Journal.

By Ferd. C. Valentine, M. D., Professor of Genito-Urinary Diseases, New York School of Clinical Medicine; Genito-Urinary Surgeon, West Side German Dispensary; Genito-Urinary Consultant, United Hebrew Charities, etc., etc., etc.

It is anything but infrequent for the genito-urinary specialist to be told by a patient that his urethra is too sensitive to permit the introduction of an instrument.

By appreciation of the cause of such a condition, by the choice of a proper instrument, by employment of that dexterity and exquisite gentleness which experience gives, the specialist quickly penetrates the urethra. The patient is astonished, and, in the majority of cases at once condemns his physician who failed to accomplish what manifestly was so easy of performance.

Nothing desirable is gained by allowing a patient to pursue such a line of thought. If there is a specialist vainglorious or weak enough to permit it, I do not know him. He injures the community by inspiring a lack of confidence in the general practitioner. The patient, returning to his home, can then never again cherish those sentiments towards his physician, which formerly made them friends and he is loath to consult him, save in extremity. Then he obtains relief only after unnecessary suffering, and perhaps danger to life.

It is eminently satisfactory for me to record that all the specialists whom I know (and I believe this embraces all the genito-urinary specialists who are alive to-day) are singularly careful to avoid injuring the patient's confidence in his physician. This can be done by a little tact in the majority of instances.

But there are patients whose disposition, aggravated by the inroads on the mind which genito-urinary ailments make in the majority of cases, will not allow them to be so persuaded. This is most frequent when urethral hyperæsthesia *apparently* rendered the passage of instruments for exploratory or therapeutic purposes impossible. It is with a view to modifying such circumstances, as far as is in my power, that I invite my colleagues to a study of urethral hyperæsthesia.

Symptoms.—Some patients, when an instrument, or even the finger, touches the lips of the meatus, draw away violently and complain of intense pain. An instrument passed into the urethra may evoke such severe bodily contortions and screams as to make any attempt at progress impossible and even dangerous. This may occur even when the softest of rubber catheters is used.

The men most prone to suffer from urethral hyperæsthesia are primarily Jews and those whose general appearance and conformation resemble those of oriental origin. Occupation seems to have something to do with the provoking of this excessive sensitiveness. It is very frequent in physicians, artists, students, financiers and merchants, when under mental stress. It may be a mere coincidence that the large number of lawyers whom I have had occasion to examine and treat, were singularly free from this embarrassing condition.

The causes of urethral hyperæsthesia are:

1. *Persistent irritation of the urethral mucosa.*—This may be due to excessive coitus, long continued masturbation, alkaline decomposition of the urine, excessively acid urine, persistent excess of uric acid, or oxalic crystals in the urine.

2. *Changes in the urethral mucosa.*—Those may be owing to inflamed spots left after urethritis; inflamed crypts, glands, or follicles; fissures at the meatus, within the urethra or at its vesical end; neoplasm of the urethra, infiltrations or stricture in any part of the urethra. A tight meatus too, may cause retention of urine within the fossa navicularis, its decomposition and consequent local irritation in this space.

3. *A tight foreskin* may maintain the meatus and glands in a hyperæsthetic condition from the decomposition of retained and decomposed secretions and drops of urine.

4. *Affections of the central nervous system* may manifest urethral hyperæsthesia as one of their symptoms.

5. *A pure urethral neurosis* is made to embrace all those manifestations of urethral hyperæsthesia for which no appreciable cause can be ascertained. The practitioner should be very chary of this diagnosis lest

it mislead him, and work detriment to the patient.

The practitioner who devotes exclusive attention to genito-urinary diseases finds that, as his experience increases, the records of his cases show a marked diminution in the frequency of the diagnosis of pure neuroses. And in proportion to this decrease of presumed neurotic conditions, the number of his cures increases.

Treatment.—As in all other ailments, the treatment of urethral hyperæsthesia must be addressed to its cause. To ascertain the cause, microscopic examination of any discharge that may present at the meatus is first made. Chemical and microscopic examination of the urine must follow. In many cases, such as acute retention, as from an apparently impermeable stricture, a specimen of urine is not obtainable. In but few cases can the cause of the trouble be ascertained without instrumental invasion of the urethra. Then, generally, or when instruments are needed for therapeutic purposes, is urethral hyperæsthesia discovered. The most urgent of therapeutic instrumentations is when retention of urine requires immediate catheterization. The first thought then naturally is of

Cocain.—The anæsthetic effect of this drug is often so immediate that the patient is likely to ask for it at all times, even when it has ceased to be necessary. Many cases present, in which practitioners cocainized the urethra before any instrumentation, no matter how simple. With a view to ascertaining whether the drug is really required, it is well to use distilled water or boric acid instead, and then endeavor, by exceeding gentleness, to demonstrate that cocain is not needed at all, in the case under examination. It is remarkable how many cases yield to the innocent deception.

Cocain, contracting the blood vessels and arresting the secretions as it does, is presumed to contract the urethra as well. This seems a mistake. The contraction acts in the urethra, as it does in the nose. It contracts the whole mucous membrane, thereby increasing, and not diminishing the calibre of the urethra. The arrest of the urethral secretions is not a serious objection, as no one would think of introducing an instrument without most liberal lubrication. The increase of the urethral lumen by cocain is certainly no objection to its use, when an emergency requires immediate evacuation of the bladder. But this widening is decidedly objectionable when the urethra is to be explored for diagnostic purposes.

Another objection to cocain is in the pain which sets in after its effect has worn off. This sometimes lasts for hours. Patients who suffer this, prefer to stand the pain of instrumentation, which ceases with cessation of treatment. Moreover, as the specialist would be derelict in his duties, if he did not use the urethrescope, he would often obtain a false impression from the artificial pallor which the urethra acquires from cocain.

Naturally, when even the most exquisite gentleness will not suffice to overcome the hyperæsthesia, cocain must be employed.

Several deaths that have been reported from this drug should warn the practitioner to be exceedingly careful in its use. Poisonings, without fatal ending, are not infrequent. It is asserted that cocain intoxication can be averted by giving the patient a good drink of whiskey before injecting cocain into the urethra. I must confess to one case in which I omitted this precaution, when I cocainized only the lower commissure of the meatus, as a preliminary to meatotomy.

Two months before I had operated, M. V., aet. 25, for a perineal abscess, evidently due to a peri-urethral pus-sac. I then employed a two per cent. solution of cocain, injecting minute drops along the region of the incision, and into the tissues which I incised, curetted and dressed. The usual analgesia obtained without any disagreeable results. There was, however, a slight fistulous opening still left at the center of the scar. This I cauterized several times, with only partial results. The tract then, as far as could be ascertained, was about one inch deep and admitted a fine probe of about 2 fil. Charriére.

The patient had a slight chronic urethritis, treatment of which I deferred, owing to the greater painful urgency of the perineal abscess.

As, however, the fistula above described did not progress towards healing for two weeks, I decided to ascertain whether a focus in the urethra was not possibly maintaining the fistula, although no urine escaped from it, nor could I ever, even when it was thoroughly exposed by incision and curetting, discover a connection of the original abscess cavity with the urethra.

The patient, having an exceedingly small meatus, the need of a meatotomy preliminary to urethroscopy was explained to him. He readily assented, with the understanding that it would be performed under cocain.

After all possible antiseption precautions a fine wooden applicator, wrapped with absorbent cotton and soaked in a 4 per cent. solution of cocaine, was slowly inserted into the meatus. The amount of solution so employed could not have exceeded two

minims. Drawing the lower commissure of the meatus downwards, the mucous membrane showed a beginning of the usual pallor produced by cocain. A fine needle of an infiltration syringe was inserted there, and a small drop of a 2 per cent. solution injected, to form a small bleb immediately below the commissure and connecting with the trifle of exposed whitened mucous membrane. Into the lower margin of this bleb the needle was again inserted, when the patient started violently. This forced the needle further into the raphé of the glans than I intended; before I could withdraw it the patient screamed: "Take off that battery; what have you in your hand, doctor? I did not think yeu would take such an advantage of me. You have to give me a written promise that you will not kill me." He grew very pale, his body trembled, his pupils were widely dilated, his hands icy cold, and his entire skin was covered with perspiration. He breathed spasmodically—about forty times per minute; his radial pulse at first bounded at 120, then quickly grew more rapid, and finally became thready and too rapid to be counted. His general nervous condition resembled that of delirium tremens, with most marked physical debility. I plied him with whiskey until the pulse approached the normal and his pupils contracted. This required half an hour. It was, however, nearly three hours before the patient fully recovered his intellect.

He vaguely recalled part of the occurrence, but knew nothing of the meatotomy which I performed at the first evidence of intoxication.

On the following day he told me that he had had some elevation of temperature during the evening, but suffered no other derangement.

His entire recollection then, of the time spent on the operating table, summed itself up in the insertion of the applicator into the meatus, and lighting a cigar three hours later. The intervening time had become entirely blank.

Some six months previously, a foreign body had been cut out of this patient's cornea, under cocain anæsthesia, without any disagreeable concomitants. The removal of an osseous spur from one of his turbinated bones a year prior to that had also been done, by another surgeon, under liberal cocainization, without any untoward effect.

The solutions I employed in his case were in both instances fresh and carefully prepared. The acute poisoning produced by me, would, therefore, confirm that the dangers of toxic cocain absorption are greater in the urethra than anywhere else. The reasons therefor certainly merit investigation.

Antipyrin.—When urethral anæsthesia is required, it may be well to test the value of a 10 per cent. solution of antipyrin. It sometimes acts exceedingly well, at others it fails utterly.

Antipyrin (10 per cent.) *with cocain* (2 per cent.) as recommended by Scharff, may occasionally subserve the purposes of analgesia. I have not yet enough experience with the combination to warrant reliance upon its invariable efficacy, nor to decide whether it acts better than either drug alone.

Technique of Urethral Anæsthesia,—After cleansing the glans and meatus with cotton soaked in bichloride (1-1000) it is well to wash the urethra as far as it can be reached by copious irrigations of hot boric acid, 4 per cent., as one would preliminary to any urethral instrumentation.[1] This washing may be rendered impossible by the hyperæsthesia. It then must be deferred until local anæsthesia is accomplished.

Grasping the glans lightly with the left thumb and index-finger, a drop of the anæsthetizing solution is placed between the lips of the meatus, without touching them with the syringe. A few moments later the syringe, lightly resting against the lips of the meatus, sends a few drops into the fossa navicularis. Shortly thereafter the syringe may be forced into the meatus,occluding it, and by slowly increased pressure, its contents forced into the urethra. The left thumb and index-finger then press the glans so that the fluid cannot escape when the syringe is removed. Then, with the right index-finger, the urethra is stroked backwards, forcing its contents towards the bladder. In from two to five minutes the urethra will usually be found sufficiently anæsthetized to permit instrumentation.

Suggestion.—Occasionally a patient comes for examination, or relief, who when placed upon the table will cover his genitalia with his hands, tremble, contort himself and fairly bellow with the intensity of suffering evoked by auto-suggestion. One patient, in whom I subsequently found a slight soft infiltration immediately behind the fossa, assured me that before the hyperæsthesia was overcome, he actually experienced the most atrocious tortures within and about the urethra, as soon as he was to be examined. I was obliged to give him a few whiffs of ether before the general mental and physical spasm would relax sufficiently to permit anæsthesia of the urethra.

[1] Valentine, "Chronic Urethritis: Its Scientifi: Treatment."—Clinical Recorder, January, 1898.

In such cases the slightest impatience or manifestation of anger, will defeat the physician's purposes and deprive the patient of his services.

Generally these self-suggested pains yield to persuasion. As an introductory thereto it may be well to place a towel or an examining sheet over the patient's genitalia and to engage him in conversation, first regarding himself, or the pains of which he complains. Gradually the line of interest can be drawn into other directions, until he is quite at his ease. Then it will be wise to suggest to him the absolute painlessness of urethral examination, when a local anæsthetic is employed, and while so doing to load a small syringe with warm boric acid solution. Much time may be gained by urging the patient to cleanse his meatus with tampons soaked in bichloride solution and having him wash out the urethra with the syringe filled in his presence. The firm assertion that he has anæsthetized his urethra, will convince him that this is a fact. I lay stress upon not allowing the patient to inject cocain, lest in his excitement and dread, he apply an excessive quantity.

Naturally the devices employed must vary according to each patient's individual peculiarities.

Urethral anæsthesia through the rectum.—In some rare cases, even when the pain of auto-suggestion is overcome, the urethral hyperæsthesia remains too intense to allow the injection of an anæsthetic solution. Then it will be necessary to inject a drachm or two of a one-fourth per cent. solution of cocain with antipyrin, gr. xv., into the rectum. In place of this injection a suppository, consisting of

Antipyrin..... 1.0
Codein. phosph. 0.02
But. cacoa..... q. s.

may be inserted. The analgetic influence exerted locally and upon the branches of the pudendal plexus supplying the urethra, can be used in this manner to procure insensibility of the canal,

General Anæsthesia.—It would be an unnecessarily broad statement to make, if one asserted that general anæsthesia is never required in examination or treatment of urethral diseases. Indeed such an assertion might be construed into a reflection upon the patience and manual dexterity of those who employ it. While I have not seen such a case in over five years, I can imagine a patient, especially a child, timorous enough, to refuse instrumental invasion of the urethra, unless he be anæsthetized.

Naturally if an emergency demands immediate catheterization, to relieve dangerous retention of urine, there is no choice.

It should be remembered, however, that under anæsthesia, urethral strictures do not participate in the general relaxation, but remain as firm as they are in the conscious state.

General Observations.—As a rule it is safe to say that, at a first examination or in an urgent emergency, local or general anæsthesia may be required, But soon the urethra grows accustomed to gentle instrumentation. Exceptions hereto may obtain in cases such as are given when reciting the causes of urethral hyperæsthesia at the beginning of this paper. The statement of these suggests their treatment, thus, for instance:

1. *In persistent hyperæsthesia* due to (a) excessive coitus or masturbation, the vice must be stopped; (b) changes in the urine, the cause must be sought and when found, combatted.

2. *When hyperæsthesia is due to changes within the urethra*, local anæsthesia will permit urethroscopy and consequent ability to discover the location and character of the disease. If it be an inflamed spot, it can be touched with silver nitrate; if infarcted crypts, glands, or follicles, they may be destroyed by electrolysis with Kollmann's needle; if fissures at the meatus, within the urethra, or at its vesical end, they may be split out fully into the urethra; if neoplasms present, they must be removed. Infiltrations of the urethra itself or strictures will have to be treated as laid down elsewhere.

3. Where a *small meatus* maintains urethral hyperæsthesia, meatotomy is indicated.

4. A *tight foreskin* demands circumcision.

5, *Central nervous lesions* require the neurologist's care.

In conclusion I hope that this brief study of urethral hyperæsthesia, will lead my colleagues to investigate the symptom further. We will then find that the many apparently pure neuroses, have a cause, and that cause discovered, the treatment will be easy.

242 West 43d Street, New York.

Preparation of the Patient for Abdominal Operations.

By Augustin H. Goelet, M. D., Professor of Gynecology and Abdominal Surgery in the New York School of Clinical Medicine.

The importance of careful preparation of the patient when operations within the ab-

dominal cavity are about to be done is universally admitted, yet it often falls short of the actual requirement, because insufficient time is allowed, and because essential features are disregarded. Something more is necessary than a clearing out of the intestinal tract and examination of the urine to exclude albumen and sugar. When practicable where immediate operation is not demanded from one to three weeks at least should be consumed in getting the patient in condition.

Careful preparation will lessen the shock of exposure of the peritoneal cavity, minimize the unpleasant effect of the anesthetic and render the convalescence smoother. It will also facilitate the work of the surgeon by overcoming intestinal distention, enabling him to do better work in a shorter time and will materially lessen the mortality following abdominal operations.

A careful examination of the heart, lung and kidneys will decide if an operation is permissible and what anesthetic is to be preferred. All things considered, chloroform is to be preferred in abdominal operations when there is no actual contra-indications, both on account of its greater safety, when properly administered, and because it causes less disturbance of the digestive tract. When the Trendelenburg position is employed it is certainly to be preferred. Not infrequently a bad heart which before would positively forbid both anesthesia and operation will be so much strengthened and improved by proper preparatory treatment as to premit an operation if it can be rapidly executed. This is particularly true of women of advanced age, whose digestive apparatus and excretory organs are apt to be inactive or impaired.

It is particularly important to establish a normal functionating activity of the excretory organs, and the digestive apparatus must perform its work properly.

To this end we must first ascertain in what respect these organs are deficient and to what extent they digress from the normal standard. Therefore daily examinations of the urine in particular should be made to determine the average voided in 24 hours, its specific gravity and the presence or absence of albumen, sugar and bile. Something near the normal standard must be attained before opeartion, and the exclusion of bile from the urine is quite as important as to exclude albumen and sugar.

The presence of bile in the urine* indicates an improper action of the liver and that the bile is being absorbed into the circulation and eliminated by the kidneys instead of being discharged into the intestinal tract. Bile is the great intestinal antiseptic and prevents fermentation, hence its absence in the intestinal tract in normal quantity permits fermentation and the result is intestinal indigestion and gaseous distention. The importance of an active condition of the liver is recognized by most operators but the administration of a dose of calomel a day or two preceding operation is not *sufficient in the majority of cases.*

The advantage of repeated examinations of the urine to exclude albumen, sugar and bile is evident since it is well known that specimens vary from day to day and even the same day before and after the ingestion of food. Therefore daily examinations of the urine extending over a period of a week or more is necessary, and these examinations should record the daily average quantity excreted, its specific gravity, its chemical reaction upon tests for the above named substances, and the result of microscopical examination for casts and epithelial scales. If after several microscopical examinations of different specimens no casts are found this part of the examination may be omitted afterwards.

It is impossible to unload the intestinal tact by one free purgation, particularly where the intestines are habitually inactive as is apt to be the case in conditions requiring abdominal operations, hence the importance of prolonged preparation. I have often found an abundance of fæcal matter in the intestines after appareatly thorough evacuation extending over a period of several days, and no doubt other operators have had a similar experience.

For thoroughly clearing out the intestinal tract and establishing a proper functional activity of the liver preparatory for operation the following course has been found most satisfactory: Administer every third night at bed time, at least four hours after the last meal of the day, two or three pills each containing two grains of a reliable extract of cascara and at the same time ten tablet triturates of calomel one-tenth of a grain each. The action of this dose is free from any unpleasant effect, and there is no griping. This is followed in the morning an hour before breakfast by a heaping teaspoonful of thialion (a laxative salt of lithia) in a cup of hot water. Every intervening night and morning a similar dose of thialion is given to maintain an active condition of the bowels which it does by exciting the flow of bile. There is no other drug the continuous administration of which

*A rough test for bile in the urine is to boil a small quantity (about ʒ ij) in a test tube and add a few drops of pure nitric acid when if bile is present the specimen changes color and becomes brown or a deep reddish brown.

acts so reliably and satisfactorily without deleterious effect. It may be continued for days producing two or three evacuations each day without the least depression. It arrests fermentation not alone by discharging bile into the intestines but also by re-establishing a normal alkalinity of their contents, and at the same time it increases the secretion of urine and renders it alkaline.

When the cascara and calomel is no longer required, (*and in most cases one dose is sufficient*) thialion is continued up to the day of operation, administering it either once or twice a days as required. It has an unpleasant flat taste in solution in hot water to counteract which a small piece of lemon peel may be dropped into the cup. It may be continued after the operation as soon as it is desirable to act upon the bowels though at first larger or more frequently repeated doses may be required.

While the bowels are being thus prepared and the liver rendered active attention must be given to the diet. It is best in most cases to limit the diet to food that will be digested in the stomach, such as meat, particularly lean beef and the white of egg carefully cooked and to avoid such articles as will ferment readily, for instance, those containing starch, and vegetables. Bread and milk are particularly objectionable. The former because it contains starch and it is apt to ferment in the intestines. Then, too, the yeast ferment is not always destroyed by the process of baking. Bread can, however, be rendered fit for food in cases of impaired intestinal digestion by slicing it thin, trimming off the crust and placing it in the oven on a dish, and drying it thoroughly until it is deprived of all moisture and becomes crisp. Milk and any of its preparations are objectionable either before or following cœliotomy, chiefly because it ferments readily and creates distention. All kinds of sweets are positively prohibited for a similar reason.

It is important to have the intestinal tract free, and the intestines collapsed at the time of operation, in fact this is one of the chief aims of preparatory treatment, hence for two days preceding the operation the food should be of such character as to leave the least possible residue after the process of digestion and absorption. In some instances it is best to give liquid food only for the twenty-four hours immediately preceding, and this must be of a character not to cause the least disturbance of the digestive apparatus.

The condition of the skin also must receive attention, and to insure proper functional activity of the perspiratory glands, frequent baths followed by massage should be given during the time devoted to preparatory treatment. Every second day will be best in the majority of cases, and in enfeebled patients great care must be taken to avoid exhaustion and depression. The bath should be given *comfortably warm*, preferably at bed time because it induces refreshing sleep and there is less liability to exposure and cold following it. It is well to add about an ounce of lysol to the bath to soften the water and aid in cleansing the surface. The patient should remain completely immersed, except the head, for fully five or ten minutes then the whole surface should be soaped well out of the water and scrubbed with a brush or mitten. When this process has been completed the surface is again immersed to remove the soap. The surface is now dried thoroughly and the patient is placed on a bed or couch between light blankets, and rubbed and massaged until the skin reacts thoroughly. In cases where reaction is tardy alcohol may be used and when the skin is dry and poorly nourished cocoanut oil may be rubbed in. Afterwards the patient, according to individual preference, is either permitted to rest awhile comfortably between the blankets or is put to bed properly.

The evening before the operation the surface of the abdomen where the incision is to be made and for a considerable distance around is shaved, and when the incision is to be made below the level of the umbilicus the pubes and vulva are also shaved. A soap plaster made by spreading green soap on a folded pad of gauze is applied to the surface at least six inches on either side of the proposed incision. This is retained in place by strips of adhesive plaster and a bandage and remains over night. The following morning it is removed, the surface scrubbed with a brush and green soap and rinsed with water and afterwards with alcohol. Then a large pad of several layers of markasol gauze is applied and held in place by a bandage until the patient is placed on the operating table. When intra-pelvis abdominal surgery is to be done in the female the vagina and vulva must be shaved and thoroughly cleansed also. To accomplish this the vulva is scrubbed with brush and green soap and the vagina is scrubbed with soap also and a pledget of cotton or gauze in the grasp of long handled dressing forceps. Afterwards the vagina and vulva are irrigated freely with a one per cent. solution of lysol to remove the soap and a vulva pad of markasol gauze is applied and held in place by a T binder.

Comparison of the results both during and following operation when this method

of preparation has been fully carried out, with the same work done after more hasty and less careful preparation will prove abundantly convencing.

Cases Illustrating the Beneficial Effects of Plastic Operations upon the Face for the Cure of Cicatricial and Congenital Deformities.†

By John J. Roberts, M. D., Philadelphia, Pa.

I have brought three cases before the Society as illustrations of what can be done for remedying the disfigurement which may occur from burns, and to show the importance of reparative surgery when large tumors are removed from the face and head.

Case I.—This colored woman some years ago fell against a range while having an epileptic fit. She burned the side of her nose, cheek and lids to such an extent that the sloughing left great deformity. The left side of the nose was totally destroyed by the sloughing and the tip of the nose pulled to the left by the contraction of the scar which obliterated the nostril. The upper lid was drawn up and the lower lip pulled downward and everted. The first operative treatment consisted in cutting the nose loose from the cheek on the left side, thereby opening up the left nasal chambers, and turning into the opening so made a large flap from the forehead. The pedicle of this flap lay across normal tissue at the top of the nose. After adhesion had taken place below, this bridge made by the base of the flap was cut loose and the stump turned up again upon the forehead to aid in covering the space left by the dissection of the flap.

This operation gave a much better appearance to the nose, although the nostril which I made has become almost closed by cicatricial contraction. This could probably be remedied if the woman cared to submit to further operation. The lips were greatly improved by plastic operations made by means of V shaped incisions similar to those used in correcting eversion of the eyelids.

Case II.—This white woman, an epileptic, also fell against a stove and burned the left side of her face so that the eyelids and globe, a portion of the ala of the nose and the upper and lower lip on the left side were largely destroyed. I have operated upon her some fourteen or fifteen times in order to repair the deformity caused by the sloughing. An upper eyelid was made by taking a flap from the forehead including a portion of the hairs of the eyebrow. These hairs serve as eyelashes upon the reconstructed lid, and she uses some black pigment in the region of the eyebrow to make the partial absence of hair there less conspicuous. The upper lip has been repaired, so as to avoid the unseemly showing of her teeth, by a large flap taken from the temporal region with a pedicle near the tragus. Something was gained in giving length to the upper lip by drawing the tissues from the other side of the face. This was accomplished by detaching the lip on the right side from the nose. The lower lip waa turned inward in order to prevent the continual overflow of saliva, by slipping upward the tissues of the chin and closing the wound in the neck by making lateral dissection of the edges of the wound.

The many plastic procedures which were required by this case need not be detailed, but it will be seen from comparison with her photograph that her countenance has been made much less disfiguring. The left side of the face is, of course, almost immobile as far as the facial expression is concerned because the cicatricial contraction of the deep burn affected the muscles of the face as well as the skin. I, of course, have only been able to replace the cutaneous and subcutaneous structures and have not been able to provide any substitutes for the underlying destroyed muscular tissue. In cases of such gravity as this it is impossible to get motion so as to reproduce the true facial expression. The absence of disfiguring contractions, however, is very satisfactory to the patient in such extensive deformities. The fact that the woman has submitted to repeated operations shows how much she feels that she has been benefitted. For a long time she would not appear before people without having the left side of her face covered. At the present time she is no longer timid in this respect since the plastic operations, combined with the wearing of an artificial eye and with the pigmentation of the eyebrow, make her feel comparatively inconspicuous.

Case III.—This man had a remarkable congenital deformity consisting of a mass of hypertrophied skin and subcutaneous tissue which hung down over the left side of the face and eye in a pendulous manner. The tumor is a congenital hypertrophy of the skin and subcutaneous tissue. It involved nearly the whole of the left side of the scalp, the left side of the forehead and the left cheek. He is unable to use his left eye because of the great mass hanging down from the brow. This condition, sometimes

†Read at the Meeting of the Philadelphia County Medical Society, Nov. 9, 1898.

called congenital elephantiasis, is not a true elephantiasis, but a simple hypertrophy of of the skin and subcutaneous tissue. The tumor has grown as the boy grew, but has not involved any additional areas. It is of course non-malignant.

A week ago I cut away all of the growth which existed below the line of the eye, leaving the whole cheek denuded of cutaneous covering. I then dissected a large cellulo-cutaneous flap from the back and side of the neck with a pedicle behind the ear and twisted this in position. Union has taken place almost completely by first intention and the granulated wound left by the transfer of tissue is healing nicely. I would have put skin grafts upon it, but did not desire to prolong the operation which was rather a bloody one. I shall at a future time remove the pendulous and hypertrophied tissue from the forehead and brow, and perhaps also remove that from the scalp.

I have presented these patients, with photographs showing their original condition, because I believe that many patients and some physicians do not realize what can be done to relieve the unfortunate victims of such distressing deformities.

Tubercular Meningitis.†

By Dr. A. M. Ballard, Ashville, N. C.

The inflammation is generally confined to the Basal pia mater. Dura mater rarely involved, neither is the convexity of the brain often involved. Pia mater congested —sometimes pale. The cavities are infiltrated with serum, fibrin and pus. The vessels along the Sylvian fissure are studded with miliary tubercles, also along the anterior peduncles of the cerebellum. The miliary granules clo' the vessels like a string of beads and as they grow they compress and occlude the vessels. These granules are sometimes met with in small numbers on the convexity and along the longitudinal fissure; they are generally however confined to the base from which they may extend to the pia mater of the cervical cord. They may be few or so abundant as to obstruct the circulation, impair the vessels, causing multiple hemorrhages and softening. The exudation is a turbid serous effusion, or a thick yellow layer which extends from the "*fossa Sylvia*" where it is most abundant to the inferior surface of the cerebellum. The ventricles are distended by a serous fluid, usually turbid. In most cases tubercular meningitis is associated with general tuberculosis; tubercles of the choroid are a manifestation of a tuberculous diathesis, they appear in the form of small circumscribed spots, of a pale, rose-red color, or grayish white tint in the vicinity of the optic disk. The sight may remain unimpaired. In the retina or choroid they indicate either tubercular meningitis or general tuberculosis.

Etiology.—Tubrcular meningitis is rare before the first and after the fifth year. Occurs almost exclusively in children of a scrofulous diathesis. In such children the tubercular process is latent and any debilitating cause may excite it.

Symptoms.—The symptoms are due, not so much to the tuberculous development, as to the exudation products of the inflammatory process, as the pia mater may be studded with tubercle both at the convexity and the base without the slightest symptoms. Its advent is generally insidious. If convulsions usher it in its course is rapid.

Stages.—Its premonitory stage is marked by changes in the nutrition and digestion. Appetite diminished, breath offensive, tongue coated, there may be diarrhœa, though generally there is constipation. The child is dull, languid and apathetic and desires quiet. Its sleep is restless and troubled. The face has a dull, anxious appearance; and when at play the child will stop suddenly and rest its head on its hands or the floor. During this time there is progressive emaciation. These prodromata may last from a few days to a month, and will often attract the attention of strangers before the parents. In most instances there is a slight evening rise in the temperature and a slight hacking cough.

Second stage, the irritative stage or invasion.—At this stage the patient dislikes to be disturbed. Light and noise annoy them. They answer questions intelligently, but unwillingly and slowly. The expression of the face is anxious; cheeks alternately flushed and pale. Headache is often severe but paroxysmal, not continuous. Is usually frontal, the patient will moan and clasp the head with the hand. In young children pressure on the fontanelles increases the pain. There is mild delirium, alternating with disturbed sleep from which the child starts with a piercing hydrocephalic cry, grinds the teeth, roll their eyeballs, and the facial muscles are contracted; the hand will be clinched and the thumbs flexed on the palms. Abdomen is retracted and hard, due to contraction of the intestines from central irritation. Projectile vomiting occurs at intervals independent of the ingestion of food. Bowels are constipated, tongue is dry, covered with a white coating,

†Read before the Buncombe County Medical Society.

and the lip is red. Pupils are contracted, there is photophobia and sometimes strabismus. Conjunctiva congested and the brows contracted. Evening temperature is a degree or two higher than the morning but rarely above 103. The exacerbations and remissions are irregular. Pulse full, regular and may be normal at first, after twenty-four hours it shows a tendency to become accelerated and slightly irregular. Respiration at times is rapid and irregular, at other times slow and regular, at first drowsiness alternates with periods of excitement but gradually becomes more constant and the child is disposed to sleep constantly. After a few days, a week in most cases, the signs of cerebral irritation give place to evidence of depression and the third stage commences.

Third stage.—The pupils are unequal and respond imperfectly to light. The photophobia and irritability disappear, the muscles at the back of neck become rigid, the head is retracted and rolled from side to side. This state is interrupted by sudden spasms with the "hydrocephalic cry" and delirium, pulse slow and irregular, and intermittent. The irregularity is very distinctive. It may be doubled in frequency on slight excitement; there are partial or general convulsions, ptosis, strabismus, loss of sight, anæsthesia, local paralysis or hemiplegia, constipation or involuntary passages, the projectile vomiting ceases, deglutition may become difficult and the unparalyzed hand will grasp the throat as if to remove obstructions. Respiration irregular and sighing, tongue and mouth covered with sordes and the passages are unnatural and offensive; temperature may be subnormal during this stage. The ophthalmoscope shows retinal changes. Optic-neuritis is sometimes present. These changes are not present in tuberculr meningitis of the convexity.

At this stage apparent recovery is of common occurrence. The child sets up in bed, is free from pain and delirium, eats well and will play as if completely convalescent, but after a few hours he lapses into a deeper stupor than before. The last stage is indicated by changes of pulse and deepening coma. Pulse runs up to 150 and 170 per minute, feeble, small and irregular. pupils are widely dilated. The paralysis which may have been transient now becomes permanent and convulsions occur; the breathing is sighing or snoring in character, contents of the bladder and rectum are passed involuntarily, body covered with a clammy sweat.

Diagnosis.—Tubercular Meningitis may be mistaken for acute meningitis, gastro-enteritis, acute Bright's disease, infantile remittent fever. Acute meningitis has none of the prodromata that in 80 per cent. of cases precede the Tubercular disease; is sudden in its onset, and rapid in its progress; the temperature is higher and has not the exacerbations and remissions that cause the tubercular form to simulate infantile remittent fever. The ocular symptoms and depressed abdomen are more prominent in the tubercular than other forms of meningitis. The hydrocephalic cry and the irregular slow development are characteristic of the disease under consideration.

Gastro-enteritis has diarrhœa, abdominal pains and tenderness, but headache, contracted pupils, photophobia, the slow irregular pulse, reflex movements during sleep, projectile vomiting and the hydrocephalic cry of acute hydrocephalus are wanting.

Infantile remittent fever is attended by a high fever that remits with regularity. The exacerbations and remissions of meningitis are irregular and the fever is rarely over 103 degs. In infantile remittent fever the vomiting is retching in character, diarrhœa is present and prominent, and the discharges pea soup in character, abdomen distended and tense, great thirst, rapid pulse, and normal pupils. The photophobia, irregular pulse, hydrocephalic cry and grinding of the teeth are wanting.

There is another disease I think it possible may sometimes simulate tubercular meningitis more closely than any of those above mentioned (if we can be permitted to suppose a child can be subject to it), I refer to the cerebral form of 'lagrippe influenza'. As it was formerly thought a child was not subject to typhoid fever, so there may be those who imagine that children never have lagrippe, but if it be possible for them to have this disease, then possibly we may confound the symptoms of these two affections. Then there are anomalous malarioid disorders with which tubercular meningitis may be confounded, the especial predilection of malaria for the nervous system, and the vast, and almost endless variety of disorders it is capable of generating through the intermedium of this system. The almost universal prevalence of these disorders in all parts of the world will suggest the desirability of considering this influence as a possible cause in some anomalous nervous and cerebral disorders.

Treatment.—The treatment is symptomatic and indications are to be met as they may arise. The disease is generally if not always fatal.

DISCUSSION.

Dr. J. A. Burroughs.—I have just got in and did not hear Dr. Ballard's paper, and

therefore do not feel competent to discuss it. The subject, I believe, was tubercular meningitis. I would just say this, that I do not know of a single case of tubercular meningitis which I have seen which has gotten well. I have seen tuberculosis of the vertebra, but where they had tuberculosis of the spinal cord they have died without exception. It is a case very common in childhod, especially those who have had bad nutrition, and, without exception, in my experience, those children died. I am sorry I did not hear the paper, because I should have liked to discuss it.

Dr. M. H. Fletcher.—I think the doctor has petty well covered the ground. I don't know anything I can add. There is only one difficulty, that is, the difficulty of diagnosis between grippe and malarial complication. As far as my experience goes, I do not think it would be difficult to make a diagnosis between malaria and tubercular meningitis. Of course we do have all kind of nervous complications, but tubercular meningitis is a thing which speaks for itself almost always.

Dr. J. T. Meriwether.—I have nothing particular to say. The doctor overlooked one means of diagnosis, that is—Recently some cases have been reported where benefit has been obtained by puncture, or even by recession of the vertebra. A recent operation has been proposed for the treatment of tubercular meningitis similar to that of tubercular peritonitis, that is trephining, and allowing an opening for air into the brain. Mr. Vogle reports some cases for which he made the diagnosis of tubercular meningitis, and the patient apparently got well, and four or five years later he had a secondary attack, and on examination he showed some signs of tubercular trouble, showing that at one time he had tubercular meningitis.

Dr. C. P. Ambler.—Dr. Ballard stated that the majority of cases occurred in children of four or five years of age, but I think there are more cases of tubercular meningitis occurring than we sometimes think. The diagnosis becomess a difficult matter. I certainly cannot agree with Dr. Fletcher that the diagnosis of tubercular meningitis is always an easy matter, for in many of the cases the symptoms come on very slowly, and you will be at a loss for weeks and weeks as to what the trouble is. I remember one case in which Dr. Fletcher was with me last winter, and I believe he will agree with me that it was a case of tubercular meningitis. I know I was in doubt for about three months as to whether I really had tubercular meningitis. At first the only thing complained of was pain. She had tubercular pulmonary trouble. Dr. Fletcher was there and agreed with me that she had tubercular meningitis. There were also two members of our society here who agreed with me that it was tubercular meningitis. She was suffering severe pain in the frontal, in the left side, and all the way down the spine. At one time the right pupil had been greatly dilated. After a consultation I went on treating her according to the suggestions of the doctors who saw her. I can say that girl is still alive. While she was in bed all last winter, she is now able to get about and walk. She is now living near Toledo, and is coming back this winter. But I would particularly insist that the symptoms in many cases are extremely difficult to place. Unless Dr. Fletcher is always certain when he sees his case of malaria, or his case of lagrippe, I don't see how he possibly can tell his tubercular trouble. The symptoms are so vague I don't believe you can tell for days and days just what the disease is, that is when it is a local disease. I perfectly agree with Dr. Fletcher and Dr. Ballard aud Dr. Burroughs that tubercular meningitis is one of the most fatal diseases we have.

Dr. J. H. Williams.—I have been very much interested in Dr. Ballard's paper and while I agree with Dr. Ballard that it is easy in some cases to make a diagnosis of tubercular meningitis, I think it is always in cases under three years of age. In the diagnosis of cases of meningitis in those of mature or approaching mature years I have found it to be extremely difficult, and in two cases which I remember, the matter was only definitely settled by post mortem, which we generally get an opportunity to have. It was my good fortune to observe and make a very close clinical record of a case of tubercular meningitis in a child a year or two ago. I made an extended report of that case to the New York Medical Record some months ago, and probably reported it in the Society. In this case, in the third stage of the disease, I had a most marked and remarkably low temperature, which ranged so low that a thermometer which would register down to 90 degrees would not register. For five days the child was simply an inanimate, inert mass, would simply breathe, and felt as though it was a piece of cold meat out of the refrigerator. Reflex was abolished almost entirely. The child would swallow if you put a few drops of any liquid into its mouth. There were occasional movements of the pupils, but outside that, except the fact that it did breathe, it was absolutely dead; the heart did beat, but beat very slow; it was like a hibernating animal; towards the end the

temperature gradually rose until it reached 100, and then death ensued. I remember a case that occurred a few years ago. The patient, a woman, had spent the preceding winter in the Riviera. She had there an attack which her husband said was very much like the attack we saw. She was in a comatose condition for days, with a temperature exceedingly high, ranging from 105 to 106 degrees without remission. The husband stated she had been treated there by hypodermic injection of creosote. That was my first experience with hypodermic injection of creosote, and I thought we would simply burn her up, but to my surprise the temperature gradually came down and with the recession in the temperature came a disappearance of the coma. Under this hypodermic injection, which I repeated twice a day at first, and afterwards once a day, the patient improved so that she was able to get up and drive around, and finally left here.

I don't think that I would always be able to make an absolute diagnosis of tubercular meningitis. There are so many other things which simulate it, at least in its action upon the nervous system, that I would find it extremely difficult, and should hesitate a long time to make an absolute diagnosis.

Dr. A. M. Ballard.—I don't know that I have anything more to say than I have said in my paper, but it is satisfactory to me to learn that there are some who do not believe it is a very easy matter to diagnose tubercular meningitis. I had a case not long ago which was thought to be tuberculosis. I had great doubts about it. I have at the present time. The child had been, like many other children during that part of the summer, debilitated, but seemed to be feeling as well as usual. The parents took a notion to give the child a dose of calomel, and there was green vomiting after that. One physician who saw the case with me considered that green vomiting was a very important diagnostic feature. I have not been able to find from the authorities that green vomiting is characteristic of the commencing stage of any meningitis, but we do have green vomiting very frequently in cases of lagrippe. That has been my experience. The child did not have any pain whatever in the head. It seemed to be in a pensive mood; it was a child of five years. She never had any pain during or preceding the sickness in her head. The pupils were dilated in the beginning. The pupils, according to the different authorities, should be constricted in the early stages. Hers never were. They were normal at my first visit, but the second day I saw her the pupils were dilated, and I think about the third day there was a little inequality in size. The temperature went as high as 103 degrees during the early part of the sickness. Later on it was about 100½. The child continued for about a week, — her intelligence not disturbed in the least, and in fact no symptoms which pointed to cerebral irritation. In the first place the pulse was not very much above normal. In the beginning the pulse was slow for the amount of fever. She did have incipient spasm at times, and that drawing of the fingers, with the thumb across the palm. She had no paralysis, and there were no general spasms. Intelligence was retained until a very late day, but there was great difficulty in swallowing. We had to introduce food by a tube into the stomach. There seemed to be a good deal of enlargement of the tonsils; they came together so as to nearly meet each other, and I think the difficulty in swallowing arose partly from that cause. The obstruction in the throat interfered very much with the breathing. The heart weakened gradually. It seemed to me that a case of tubercular meningitis was not made out in this instance. By the way, I will say that this child's bowels became perfectly normal.

In speaking of grippe as a possible thing with which it might be confused, I have never seen a child with what I thought was grippe, but I don't know why they might not have grippe. I did have a case of grippe at the cotton factory some eight or nine years ago. It was a nervous form, in which the stomach was affected. The woman vomited green for days, grass green. This woman went through the same process as the child and as I recollect that case it corresponded exactly to that of the child. There was the same condition of the pupils and the same incipient spasms.

The Treatment of Posterior Displacements of the Uterus.

By L. Grant Baldwin, M. D., Gynecologist to St. Peter's Hospital: Chief in Gynecology, Long Island College Hospital Dispensary (Polhemus Memorial Clinic), New York City.

Of the minor non-inflammatory affections of women there are none that are more pernicious in their effects on their physical and mental well-being than posterior displacements of the uterus with their accompanying pathological conditions.

By posterior displacements I refer to retroversion and retroflexion, two conditions which are usually described separately, but

for the confines of this paper no distinction will be made.

It may be well to consider in the beginning the normal position of the uterus in the pelvis, and bear in mind that it is a very movable organ and cannot be said to have any one position from which it must not deviate with the varying conditions of the surrounding viscera.

With the bladder and rectum empty the uterus occupies a position of what may be called normal anteversion; with either of these organs full or over distended the position will change within a considerable space without being pathological, returning at once to its proper place when these organs are evacuated.

It will not be necessary to consider the different degrees of retroversion or retroflexion, for in practically all cases they soon become complete. Therefore, any stable inclination of the fundus uteri backwards with descent to an uncertain extent will be considered a pathological posterior displacement.

That many women have retroversion without attendant symptoms is a commonly observed fact. So long as the entire organ keeps in its normal plane, even though displaced forward or backward there may not be, and often are not, any symptoms to indicate the condition.

I have failed to find any reliable statistics as to the frequency of this condition, but certain it is that it is so frequent as to be a subject for much thought and study, there being but few affections which are more often met with in the practice of gynecology.

The causes of posterior displacements are in many cases obscure, but as a general rule are chronic in their nature. That a uterus can be dislocated permanently by a sudden strain or lift *I do not believe*, and for it to occur at all the bladder must be distended, for otherwise any increased intra-abdominal pressure will only increase the normal anteversion. I also very much doubt that falls on the back or feet can produce such a result, i. e., a permanent retroversion.

Aside from new growths in the uterus itself and the contiguous organs Shultze, in his admirable work on "Displacements of the Uterus," gives five anatomical causes of retroversion and retroflexion. By far the most common of which is a relaxation of the attachments of the organ. So long as this does not occur the uterus will at once return to its normal position of anteversion after evacuation of the bladder and rectum. If the cervix remains in its normal position of posterior fixation by the folds of Douglas and the anterior vaginal wall, retroversion will not occur unless the active causes are more or less constant, otherwise if from any cause this fixation is lost, and the cervix does not return to its normal location after being pushed forward by an evacuation of the bowels, it is in just the favorable location for the fundus to become retro-displaced by the first vesical distention thereafter. Of course the other attachments of the uterus, both muscular and cellular to the surrounding organs, are important and, especially so, are the round ligaments. Always bearing in mind that the uterus, like *all* other organs of the body, is suspended from above, the support from below from the perineum being only *secondary*.

This muscular relaxation is largely due to two sets of causes, puerperal and non-puerperal.

In unmarried and nulliparous women *habitual* constipation with the attendant straining at stool, together with an over-distended bladder, is by far the most potent factor. The injuries to the uterus itself, and its attachments during labor, produce the same result to a greater degree as well as more quickly and permanently; the most important being the injuries to *the auterior* vaginal wall.

The puerperium as ordinarily conducted is responsible for many cases of posterior displacement, independent of lacerations.

The lying-in-woman is usually kept on her back to evacuate both the bladder and rectum for the first week or ten days after delivery. The uterus, with all its attachments stretched or loosened, by force of gravity tends to sink as far backward as the walls of the pelvis will allow. Now let the rectum be filled, which it usually is, pressing the cervix forward, and the bladder in a like condition still further forcing the fundus backward, and the patient placed on any of the ordinary bed pans, exerting the necessary intra-abdominal pressure to evacuate either or both organs, and what more favorable conditions and forces could we have to produce a permanent displacement. The wonder is, not that so many women date their illness to child-birth when we find this condition existing, but rather that they do not all get up with more or less displacement. For my own part I believe that a woman should never be allowed to evacuate bowel or bladder under such conditions unless there is more than the ordinary contra-indications to her assuming the upright posture.

Inflammatory affections of the appendages are more often a sequelæ of, than the cause of, retroversion. The displacement

can undoubtedly be congenital. I have never seen such a case.

The diagnosis of this form of displacement cannot often be made from the clinical history of the case, for until there is sufficient descent of the uterus there may be none of the ordinary symptoms, as backache, bearing down and inability to stand, etc. It is upon the nervous system, often times, that a woman will show the most marked effect of uterine displacement in various reflex conditions, and especially is this true when not accompanied by the injuries of child-birth as causative factors.

A marked example of this kind came under my care now about one year ago. A married woman, never pregnant, complained of being very nervous, with spells of melancholia bordering on mania of a suicidal nature and having epileptiform convulsions, in frequency from one a day to thirteen a week. Examination revealed a posteriorly displaced uterus. Almost complete relief was experienced as soon as the uterus was raised to its normal plane in the pelvis. I was not able for some time to maintain it in its normal anteversion. For a diagnosis we must depend upon the bi-manual examination, and with a little painstaking and experience it can so be made in the vast majority of cases, and until we can map out the uterus in this manner its position will be in doubt. To do this the bladder and rectum must be empty with the patient in the ordinary dorsal position on a table or chair of convenient height, (a bed is never a satisfactory examining table,) the thighs not flexed more than to a right angle and with no unnecessary constriction about the waist.

If the uterus is not found back of the symphisis where it belongs it must be at some point between that and the posterior wall of the pelvis. New growths in the uterus itself or the adnexia will oftentimes confuse and require careful differentiation.

Anteflexion with retrocession I have found most often to confuse. The sound or probe should only be required in exceptional cases, as when there is an unusual deposit of adipose tissue. In fact no pelvic examination is properly begun until the uterus is located in or out of position, constantly bearing in mind that it has no position from which it must not change with the varying conditions of the surrounding organs.

Having then decided that a given case has a movable posterior displacement, what is the best method of treatment from the standpoint of the patient, considering not only her immediate surroundings, but always looking to a possible pregnancy.

To consider posterior displacements with fixation would extend this paper beyond your endurance.

At the present time to advocate any method of treatment for almost any gynecological affection, that is not operative, is, I am aware, not in accord with the prevailing custom, however, I emphatically recommend the treatment of this form of displacement by the means of pessaries, of suitable material, size and shape, as being the best and safest means at our command, reserving operative measures for such cases as we are unable to cure by this simpler and safer means.

Of the existence of a properly fitted pessary the woman should be no more conscious than of the hair upon her head. To secure this result it must first of all keep the uterus in a position of *movable* anteversion; it must be as large as necessary, but not distending the vagina to the ablation of its *rugæ*; it must be of a material that will not become fouled by the secretions, and of a shape to fit its particular vagina and without pressure on any locality; it must not act by pressure on the uterus itself, but by as far as possible restoring the cervix to its normal position of posterior fixation.

To do this each case must be studied by itself and the support adopted accordingly, or as Dr. Emmet so aptly expresses it, "as a locksmith fits a key to a lock."

Of course, if lacerations of the vagina or cervix exist with attendant sub-involution such conditions must receive attention.

For myself I prefer pessaries made of hard rubber, and the patterns of Emmet and Albert Smith are found to most nearly conform to the general run of cases. It is sometimes wise to use a soft rubber one in the beginning until the desired size and shape have been found.

The hard rubber is best moulded by placing in boiling water until pliable. They can be softened by passing through the flame of a Bunsen burner or alcohol lamp.

I know of nothing that requires any more practice and repeated trials than the fitting of pessaries, and whoever has not the time to cut and try had better not make use of them.

The first step in the treatment is to reposit the dislocated organ; this is best accomplished with the patient in the position described for diagnosis. Only in rare instances will any means be required except the hands of the operator and an Emmet's tenaculum. It is my belief that the uterine sound as ordinarily employed to antevert a displaced uterus is responsible for many cases of salpingitis, both simple and sup-

purative. The so-called repositors, as the Elliott, should *never be used*.

With due care as to cleanliness catch the posterior lip of the cervix with the tenaculum and pull it backward and toward the entroites, gently, but as far as possible without causing too much pain, and while in that position with the left index finger raise the fundus as far as possible and this will allow the cervix to be still further carried backwards and may now be carried more into the hollow of the sacrum. Now the right hand can usually be made to get behind the fundus and nearly or quite meet the finger in the vagina, and the fundus can easily be brought into a position of anteversion. This manipulation will often have to be gone through a number of times and the entire co-operation of the patient is essential to success, and a little experience will make it much easier. The knee-chest position is sometimes of service in the first dislodgment of the fundus, after which the dorsal position can be taken for the completion of the manipulation.

The size of the pessary will be best judged by the index finger, and with a little practice can be determined with at most two or three trials, and then by the means of boiling water or flame can be moulded to the particular case in hand.

I make it a rule for every patient to come back for examination at the end of a week, if she has no discomfort, and sooner if she has, then if all seems right she is instructed to return after each menstrual epoch, when the pessary is changed and disinfected, care being taken that there is no evidence of pressure at any point.

Whatever bad effects of pessaries I have ever observed have been due to a disregard of this rule. A single case will serve as an example of what can be accomplished.

Miss S., age twenty-seven, teacher of painting by profession, had been ill five years and under treatment most of that time, consulted me for backache, bearing down and inability to stand or walk, with nervous system so much involved she had been obliged to give up her position. Bowels markedly constipated. She had been advised to have an operation. Examination revealed a complete posterior displacement, which at first seemed fixed, but on a little manipulation was easily dislodged and restored to normal anteversion, and a pessary was at once fitted. She has remained well since, now seven months, she has resumed her teaching and has been allowed to drive, walk and dance as much as she wished.

If any one can show me a case restored to health and society any more positively, safely or quickly by operative measures, I will be glad to, in the future, adopt such treatment. I have, to the present time, failed to make comfortable but two cases of movable posterior displacement; one due to an enlarged and cystic ovary with salpingitis, and the other a single woman with so much vaginismus that treatment through the vagina was too painful.

The operative measures now most frequently employed are shortening of the round ligament, either extra or intra-abdominally, known as "Alexander's Operation," ventral fixation by various methods, and what is known as "Mackencrodt's Operation," which as you know is a fixation through and to the anterior vaginal wall. It has been many times modified.

It would be beyond the scope of this paper to go into a full discussion of these measures, but a few points may be mentioned.

In Alexander's operation the uncertainty of a permanent result, the loss of time necessary for the performance, the *all too frequent occurrence* of *double* or *single hernia*, and *the uncertainty that it will relieve the symptoms*, and that the *patient* will *not* be *obliged* to *wear* a *pessary after all*, make it an operation that I feel sure but few surgeons would recommend for a member of their own family, until all other simpler means had been tried aud failed to give relief.

Much the same objections are made to ventral fixation with the dangers, though slight may they be, of an abdominal section added. If the abdomen has to be opened for some other condition the premises is different.

Vaginal fixation I have never done, but it seems that to insure success we must have a good anterior wall, just the cases that would most easily yield to treatment by pessaries.

Some decidedly untoward results have been noted from both this operation and ventral fixation, complicating labor, but the advocates of each claim that in such cases the operations were not properly done.

That the operative measures are so numerous and so frequently modified is strong evidence that none of them are as satisfactory as their respective adherents would have us believe.

28 Schermerhorn St.

At a meeting of the New York Academy of Medicine, Dr. Martin W. Ware exhibited under the microscope a tubercular gland from an infant who had been infected with tuberculosis during a ritual circumcision.

When is Hysterectomy Justifiable?

By Dr. C. E. Ruth, Professor of Descriptive and Surgical Anatomy, Keokuk Medical College, and Clinical Surgery at St. Joseph's Hospital, Keokuk, Iowa.

If I was not satisfied that many unjustiable hysterectomies have been done I should certainly not have anything to say on this subject at this time. To those who expect me to answer this question so that each may be able from rules of mathematical exactnesss to say in any given case that hysterectomy should or should not be done, I warn you now you will surely be disappointed.

Case 1.—In 1883 I attended a Mrs. G., aged 46, who was suffering from extreme vesicle irritation, which proved to be due to a fibroid tumor of the uterus which ceased to annoy her in a few months. No operation was ever done on her of any kind and she is at this writing and has for many years enjoyed good health.

Case 2.—Mrs. P., aged 70. Was called to attend this lady for apoplexia from which she died and incidentally learned in the examination of the case that she had a fibroid tumor weighing probably fifteen or twenty pounds. The husband informed me that she had known of the presence of the tumor for a quarter of a century. Had always been in perfect health until cerebral hemorrhage closed the scene.

Case 3.—Mrs. S., at the age of 40 began to suffer from pain and severe menorrhagia which lasted for ten years and brought her many times to the very gates of death. I examined her in 1888 when her uterine cavity measured ten inches in depth, due to a fibroid tumor of the uterus. Without operation she has now better health than for twenty-five years.

Case 4.—Miss M. A., aged 42. Examined by me in April, 1896 Was suffering from pressure symptoms due to several fibroid nodules on the uterus. No operation of any kind was done. Has been entirely free of all symptoms for three and a half years.

Case 5.—C. H. R., aged 28. Examined by me in 1892. Suffering from pressure symptoms due to uterine fibroma; no operation; has entirely recovered, at least so as to be free of symptoms for five years.

Case 6.—Mrs. J. E. L., aged 26. Examined by me first in 1893. Suffering very severely from pressure symptoms due to uterine fibroma in the pelvis. Improved and much relieved of pain in six months, when by second examination I found tumor had rapidly increased in size and was occupying the abdominal cavity. It was not causing pressure symptoms as in its former cramped quarters. Examination a year later patient much improved in general health; tumor stationary. Examination two years later, patient's condition better than for eight years; tumor one-fourth former size. At present it is difficult to demonstrate.

Case 7.—Mrs, M., colored, aged 46.—Examined 1894, Fibroid size of a cocoanut —still living but do not know her condition.

Case 8.—Miss J., aged 47. Examined 1895; fibroid tumor reaching above the umbilicus; no symptoms save inconvenience from weight. Works every day in apparently perfect health.

These eight cases which have come under my notice were of unquestioned fibroid not operated upon and yet after the lapse of many years in some of the cases the patients are improved in health or all symptoms save the tumor are gone, and in some of the cases even the tumor has become insignificant in size after having attained very creditable dimensions, and this in some instances when the patient was less than 30 years of age. In a practice of over fifteen years I have never known a case of death due to fibroid tumor not operated upon. This would naturally lead one to ask the question, how much good has been accomplished in the surgical treatment of uterine fibroma?. A better way, probably, to put the question, would be, has the good outweighed the harm? I do not mean to say that no deaths have occurred from uterine fibroma not operated upon, but do mean to say that the number must have been very small or I should at least have seen one case in which death could be attributed to that cause. Especially may I be suspicious of hysterectomy as a life saving procedure when done for uterine fibroma when I know of several deaths due to operations for their removal, in some of whom I have been a responsible actor.

I do not wish to be understood as being opposed to hysterectomy for fibroma under all circumstances, but think that the cases requiring removal of the uterus must be few indeed. Most of the fibroid uteri examined by me whether removed by me or not show that the tumor or tumors could have been removed without sacrificing uterus or adnexa, and when we are sufficiently skilled this will I am quite sure be done in nearly all cases now having the easier and less surgical operation of hysterectomy. It is much easier often to amputate a leg than to save it, but that fact would never justify amputation. It is much easier to

remove the ovary entire than to take out a piece damaged beyond repair and leave a healthy portion, yet that fact does not now justify the excision of the entire ovary in a young woman if part of it is healthy.

In the hands of the most skilled operators the mortality of hysterectomy is probably still fully ten per cent. while in the less proficient it is not putting it too high to say one-fourth are still lost. All fibroids, except the soft variety are greatly benefited or cured by double salpingo-oophorectomy, which should give an almost *nil* mortality. I have very little sympathy with the idea of removing the uterus in all cases where the ovaries or tubes and ovaries have been sacrificed for septic conditions, simply because it is no longer to be used for child-bearing. The same might be said of the large number of cases of urethritis in women past the menopause. The removal of the uterus adds much of gravity to the operation. Besides dilatation, curettage and drainage measures meet all the obtainable indications for cleanliness and drainage, possible for endometritis when properly done with less of risk. Should sepsis have invaded the entire uterus its removal might be justified, if the infection has not spread hopelessly beyond the organ along the lymph channels.

In most cases of salpingitis the gonorrhœal infection which was its primary cause is no longer active and the uterine infection is usually as old or older than that in the tubes. We know if we provide drainage many of these cases of pelvic and abdominal suppuration will recover sufficiently at least that normal gestation may again occur, hence this plea for conservatism of the uterus as well as ovaries and tubes in all cases in which the prospects of relief are good with equal or greater prospect of life.

In cases in which pain is severe especially when due to pressure and cannot be relieved by elevation of the uterus and tumor in those which have attained considerable size and continue to grow, especially when they are not checked by milder means, after three to six month's trial, hysterectomy or myomectomy may be urgently required. I now never remove ovary tube or uterus where I can render it presumably innocuous, because I am sure the patient will live longer and be happier. I now leave one-half the female generative organs that I would have sacrificed a few years ago and believed I was doing my duty. In cases of uterine fibroma, rapid growth, severe hemorrhage, and hydrorrhœa, sloughing, suppuration, malignant degeneration, pressure interfering with the ureters, circulation and respiration may all require that hysterectomy be promptly done. Removal of the carcinomatous uterus, I believe, if done early a justifiable procedure, but not if infiltration involves the broad ligaments of bladder or rectum to any considerable extent. I would especially condemn hysterectomy in all cases where the lymphatics are involved along the common iliac vessels, and advise only palliative measures.

323 Blondeau St., Keokuk, Iowa.

Unexpected Recovery from a Severe Abdominal Injury.

By Dr. J. W. Henson, Professor of Anatomy in the University College of Medicine, and Surgeon to the Virginia Hospital, Richmond, Virginia.

It is often said that Surgery is a more exact science than Medicine. If surgery can be an exact science then we have many things to learn. This is particularly true in reference to prognosis. As a case in point I wish to give the history of an abdominal injury from which the patient made an early and almost uncomplicated recovery. The injury was so severe, and the conditions so unfavorable that death was decidedly the expected result.

During the recent summer I was by courtesy surgeon to the City almshouse for one month. About 5:15 p. m., Sept. 3, 1898, a big, muscular mulatto (35 years of age) received two wounds from a pocket knife in the hands of a vicious negro. One was a stab in the left side. The knife struck the tenth rib, glided down between this and the eleventh rib and pierced the diaphragm, entering the abdominal cavity. The second wound was a cut following a stab. The external cut extended in a curved direction (with convexity downward) from one and a half inches above the left anterior superior iliac spine to the linea alba, two inches below the umbilicus. Everything in the anterior abdominal wall line of this cut was severed.

Strange to say, the omentum though long was uninjured. The small intestine was punctured at one point and at another was cut half in two. Fecal matter came out at both points, very freely at the larger intestinal cut. The man's intestines instantly rolled out into his very much soiled clothes and he lay on the floor in this condition until the ambulance reached him at 5:30. The doctor in charge rapidly insinuated gauze between intestines and shirt, covered the whole with cotton and took the patient to the almshouse, where he was forced to

wait until 7 p. m. in the condition last named because I was out of my office.

Dr. Marvin Nuckolls came at that hour and began surgical attentions about 7:30. I arrived about 8 o'clock and with his valuable assistance completed the work about 9 p. m.

There was a slash one and a half inches long in the peritoneal covering of the splenic flexure of the colon. As this could not be closed without greatly enlarging the external wound it was left. The abdominal cavity was filled with blood and clots and the peritonem much soiled with feces. After the intestinal wounds were closed. I spent much time in washing the cavity and intestines with James river water, part of which had been boiled and part not. It was the best I could do. Into the water was put about enough salt to make normal saline solution. The large external wound was closed entirely. Continuous suture for peritoneum interrupted suture for muscle, fascia and skin. The stab in the side was left open, a piece of gauze being introduced two or three inches for drainage.

So feeble was the circulation and so nearly did it fail, often, that the patient received as much as one-fifth of a grain of strychnia sulphate by 9 p. m. Through necessity the operation was done in a room which was anything but aseptic. The patient reacted beautifully in a few hours. There was no nausea after twenty-four hours. Nourishments and stimulants were taken well and hunger became decided after five or six days.

There was never any sign of peritonitis. The bowels moved easily from enema or a very small dose of salts. The temperature never got higher than 99. 8–10ths, though some little fever was found as late as September 14th. Recovery was complete in a very short time. We know that the peritoneum of the brute is much more tolerant of injury than that of man. The negro is not so far removed from the brute as is the white man. How much these two facts influence the result in such cases as the above is a question worthy of careful consideration.

Vis Medicatrix Naturæ.

By W. L. Reagan, M. D., Weaverville, N. C.

Frequently, in our Medical Journals, the correspondent refers to his long time in practice—20, 30 or 40 years—and what he has learned and unlearned, and his tough experiences and many observations, &c.

A great many of such articles are a real pleasure to read, to say nothing of what they learn us.

We can, in this way, compare means used and advantages gained. The unseen rock in the muddy stream can be easily shunned if we stand upon the bank until we have seen the direction others take in crossing. To the older men in the profession there is an exchange of knowledge by these auto-biographical sketches and the younger brethren learn the direction to go —what to make use of in medicine, how to use it and what to avoid.

When I began, what I have closely followed for twenty years, I was a most thorough believer in curing my patient with drugs alone.

When I had examined the patient and diagnosed his disease, or thought I knew what was his trouble—how many of us have had fears along this line—then I dosed out the remedies—generally several—gave directions when to give this and when the other, and say: "Now when these have their effect you will be well," or better, as the case might have been.

Little did I dream how hard and in how many ways nature sought and strove to restore and in many cases, no doubt, did restore, notwithstanding my efforts to the contrary.

I had a diploma from a medical college, and medicines must do what the books taught they would do.

Why, as I look over my old note-book I am made to wonder how some ever did get well. What heroic treatment! I used no disinfectants, no antiseptics, nor prophylactics. Thought little or nothing of hygiene, and knew nothing of the wonderful power of mind over matter. Baring some little restrictions as to diet, medicine was my *magnum donum dei*. I practiced in the country and carried 50 or 60 different kinds of drugs and, truth to tell, often wished for larger saddle pockets.

Looking at it now, I really think numbers of lives were not sacrificed for the reason that I was not able to purchase drugs I imagined I needed. I say imagined, for now, with perhaps one-eighth of the number of drugs formerly used, and still in active work of the profession, but with far less reliance upon drug therapeutics as the only and unfailing cure of the sick, I feel pride and that delightful satisfaction that comes along with a larger proportion of more rapid recoveries.

It is a source of regret that hygiene is not taught more in our schools and colleges. So much of sickness is the direct effect of ignorance of its laws.

Had our army in Cuba had a better idea

of hygiene, or been able to carry out its teachings, there would have been far less than seventy-five per cent. disabled, even without a single drug of any kind. It is criminal to neglect the comfort of the sick. We should look after the mental as carefully as the physical comfort if we wish to be eminently successful.

It is often next to impossible to get proper ventilation in a country practice. Those who have had to treat four or five cases of typhoid, or scarlet fever, or measles in some country home where the sick room was dining room, kitchen and living room of a whole family, and the house made of logs, the cracks chincked and daubed and no windows, will appreciate what I say of difficult ventilation.

Had I used mental suggestion when I began practice, and, in fact, used only natural agencies except, perhaps, some placebo, for the preconceived expectations, ideas and demands of both friends and patient must be satisfied or, "he's no doctor," I say had this course been pursued the journey along this highway of treatment would have been traveled with more agreeableness and pleasure and less fears and misgivings.

"The hooser farmer," in relating the death of his wife, not only touches us with tenderness and sympathy, but teaches us a moral in his rough and homely way.

"Lived together forty year, sir, her and me come next December! never had no trouble neither; died, two years ago in August. Had the grip, or something like it; took a powerful sight of quinine, and a heap of draps and powders, and right smart of other truck too; nothin' seemed to do her good tho'."

Supplying Deficiencies, Malaria, Small Dosage, etc.

By J. S. Leachman, M. D., Gallion, Louisiana.

Let an enemic individual go to a physician and, as a general thing, the prescription will be iron in some form or other. Now the question *is*, is this the proper prescription? I say no, or at least I would not prescribe in that way. I would first give phosphate of lime and soda in small doses, and my reason is this? The cause of this condition (meaning a lack of blood) is wholly due to a deficiency of cell salts, calcium phosphate and sodium phosphate in the gastric juice, bile, and pancreatin. Ferments constantly arise and are taken up by the absorbents, and the blood not being pure, but vitiated with acids, does not furnish the constituents of bone, nerve, muscle, &c. The cure consists in supplying the lacking agents either by way of food or medicines and stimulating digestion. Calcarea phosphate supplies new blood cells, and the indication for it is face pale or of a greenish white. After new blood cells have been supplied and there still appears to be a deficiency in red blood corpuscles iron should be exhibited as it has the power of attracting oxygen. I use my phosphate of lime and soda, and then follow with iron. When a physician gives iron, on what principle does he do it? I would answer, to supply a deficiency in the blood. He must have some rule or indication of his own for prescribing this inorganic cell salt of the blood. Does he also have an indication for potassium sulphate? potassium chloride, potassium phosphate, soda phosphate, soda chloride, soda sulphate, lime phosphate, lime sulphate, lime fleuorine, magnesium phosphate and silicea. They are as much cell salts as iron, and if we have an indication for iron, in the name of common sense we ought to have for the rest of the cell salts. For my own part, I have. I have studied Bio-chemistry (chemistry of life) and use it in my practice.

Some one may ask, what kind of a physician I am. I am like a certain Governor of one of the States, when he was interrogated as to the money question just before either the democrats or republicans had their national conventions. He said he would like to have more gold, more silver, more nickle, more copper, and more paper money, and rather than not have enough, more counterfeit. I am a graduate of the regular school of medicine (old school). I consider all regular incorporated schools of medicine "regular;" also, consider all educated physicians regular; but, as I am digressing, I must get back. I accept any remedy that proves to be good, from the old school, the eclectic school, the homœopathic school, hydropathic, physio-medical, and rather than not get through all right, use a little Sac. Lac. as a placebo.

Now in regard to malaria, What is malaria? Please don't all speak at once. Some of the readers of this article will say that my friend, brother Ben. H. Brodnax, M. D., has ruined that subject, and also injured the good name of quinine in many sections. The fact is he has injured the rep. of quinine in this section, but we have another physician here in the same section that has played havoc with blister ointment. Let an ague patient go up a mountain until he reaches a cool dry strata above a point where water is held in solution by heat and his ague is immediately cured. Does it require a wet soil for the plasmodium, or how

is it that a cool dry strata of air fixes 'em? Must be easily did up.

I have cured chills with the x 3 attenuation of sulphate of soda, and did it up all right. The bio-chemic theory of malaria is about this. We breathe an atmosphere that's damp and become over-charged with water (water logged), and we chill, have fever and sweat, an effort of nature to throw off the water (excess of water in the system). The patient is debilitated, probably digestion bad, and he was not able (system not able) to throw off the excess of water that he had breathed into his system, thus the effort of nature (the chill) to rid him of this excess of water. Natrum sulphate (soda sulphate) in small doses, often repeated, is the cell salt that regulates or throws off the surplus of water, and it works as I have used it in many cases, and the truth of the pudding is the eating.

If we aim to supply a deficiency of one of the cell salts (as iron) how much must we need give. In the one thousandth grammes of blood cells the inorganic cell salts are, at this rate: Iron phosphate 0.998, potassium sulphate 0.132, potassium chloride 3.079, potassium phosphate 2.343, sodium phosphate 0.633, sodium chloride 0.344, calchium phosphate 0.094, magnesium phosphate 0.060—see Burge's Manual of Physiology and Pathelogical Chemistry. One quart of milk is found to contain, by analysis, one sixth millionth of a grain of iron. Look at the small amount of iron it would take to supply the deficiency in the system. The same with all the inorganic cell salts. I cured about one year ago a very bad case of nervous prostration with about 30 doses of potassium phosphate and magnesium phosphate, x 3 alternation, about 5 grs. at a dose, four times daily, and as proof of this I will give my old friend, Dr. Ben. H. Brodnax. This set Dr. Ben. to thinking and dealing with small doses of medicine, and I am glad to say he has come out in that bold manner of his, and has not been afraid to give his experience with the small and oft repeated dose. I notice that he is well fitted up with specific medicines and is using them according to indication. He is just getting up out of a little sick spell, and I had no trouble in giving him aconite and gelsemin for fever, but there was an indication for nux vomica and he made grimaces and did not like the bitter much.

Brother physicians, I hope I have said something that will cause you to think, and especially that it may be the means of your getting good reliable drugs of uniform strength, study up their indication and use in the small and oft repeated dose.

Some Points as Aids in the Early Diagnosis of Locomotor Ataxia.

By J. T. Eskridge, M. D., Denver, Colo., Neurologist to St. Luke's Hospital and Consulting Alienist and Neurologist to the Arapahoe County Hospital.

Locomotor ataxia (posterior spinat sclerosis, taber dorsalis), for many reasons, should be diagnosticated at as early a period of the disease as possible. Many physicians have come to regard locomotor ataxia as an incurable disease, and one that is rebellious to treatment at all stages. The fact is, however, that more than one-half the cases may be almost completely arrested in the incipient period of the disease, and nearly all are more or less amenable to treatment, if this is instituted before the patient becomes greatly exhausted, or before he has to take to his bed. It must be borne in mind that the earlier proper measures are adopted to arrest the morbid process the greater the benefit to the patient. Timely recognition of the disease, and clearly differentiating it from other conditions for which it may be mistaken, save the patient much useless and empiric, if not harmful, medication.

What I have to say here is for the busy, general practitioner of medicine, who has not time to make himself fully conversant with the multitude of symptoms of posterior spinal sclerosis described in works, or encyclopedic articles, devoted to detailed descriptions of the disease.

One fault that few of us can claim entire freedom from is, in allowing a patient to make his own diagnosis. This is especially true if he happens to complain of rheumatism. The physician may be busy or tired, and a patient consults him saying: "Doctor, I am suffering from rheumatism in my legs, can't you help me?"

How few hesitate to prescribe for rheumatism under these circumstances? The medicine is taken and the patient is relieved for a few weeks, or it may be for months, when he again returns, is given anti-rheumatic medicine, is relieved after a day or two. for a longer or shorter period. The physician under these circumstances observes that the weather has a great deal to do with the patient's suffering. When it is stormy, cold or damp, the pains return with greater frequency. The physician is consulted for several times, but finding that relief is only temporary, he consults some one else and undergoes somewhat similar treatment with his second physician, and in this way, physician after physician, is consulted for the relief of supposed rheu-

matic pains for years in cases in which the pains are one of the most obtrusive symptoms of locomotor ataxia. I have just seen a case of this disease in which the patient, for a period of 15 years, has traveled over Europe and America, and been treated by numerous physicians at the various watering places for neuralgia, stomach trouble, and rheumatism. A careful examination reveals locomotor ataxia in an advanced stage. There is pronounced optic nerve atrophy, loss of the knee-jerks, and iritic reflex and shooting pains are present, but ataxia is present to only a slight degree. It is quite evident, had a careful examination been made earlier in this patient's case, the anti-rheumatic medicine would never have been given, the patient's disease might have been arrested, and certainly he would have been saved many thousands of dollars in expenses, and a great deal of annoyance and inconvenience.

A patient has recently consulted me from the State of Kansas, for rheumatism, from which he says he has suffered for a period of five years, been treated by numerous physicians, and visited various hot springs, without relief. This man has a typical case of locomotor ataxia. I am putting it mildly when I state that four out of every five cases of this disease for which I am consulted, have been treated a longer or shorter time for rheumatism. I am quite sure that if physicians, instead of accepting the patient's diagnosis of rheumatism, were to inquire into the character of the pains, especially relating to their acuteness and shortness of duration, that few cases of disease of the spinal cord would be treated for rheumatism.

Another mistake that a physician often make is, when a patient consults him, complaining of dimness of vision, to send him to an oculist without an examination. The oculist probably neglects to make a neurological examination, treats the patient for optic nerve atrophy, until the patient has developed an advanced stage of posterior spinal sclerosis. Such patients rarely have an ataxic gait, and spinal cord disease is not suspected, but these cases have absent knee-jerks and iritic reflex, and sometimes shooting pains are present.

It is not my purpose in this short article, to go into a lengthy diagnosis of posterior spinal sclerosis, but to point out some of the most prominent and easily detected symptoms. The earliest, most constant, and obtrusive symptoms of locomoter ataxis in its early stage are, absent knee jerks, shooting or lightening-like pains and loss of iritic reflex.

Pain.—The pain is significant. It comes on suddenly, is stabbing, shooting or lightning-like in character, and lasts but a few seconds or a fraction of a second, followed in a few seconds or a minute or more by another pain similar to the first one experienced. The pain is most commonly felt in the legs, and usually shoots from above downward, and is often felt most plainly in the thighs and calves of the legs. Sometimes the heel is the seat of intense pain. The paroxysm of pains, with recurring pain at intervals of few seconds or minutes, may last from several hours to two or three days. It rarely, in the beginning of the disease, lasts for more than a day. After the paroxysm is over, the patient may feel unusually well. Its recurrence at first may be separated by prolonged intervals, but as the disease becomes advanced, it returns with greater frequency and the pain seems to be more influenced by changes in the weather. The pains are sometimes felt in the arm or chest only. The joints are not the seat of a steady pain or ache as in rheumatism, neither are the joints affected by stiffness and swelling. If there is any tenderness it is over the course of the superficial nerves.

Iritic reflex.—Loss of iritic reflex when not due to adhesions of the iris, and these may be readily detected, is always suspicious of degeneration of the central nervous system and points strongly to posterior spinal sclerosis. The reflex may be less in one or both eyes, most commonly in both. The iris responds well to accommodation, but little, if any at all, to the influence of light on the retina. In many cases of locomotor ataxis the iris will not respond to short exposure of the eyes to the light. If the patient is made to stare out of a window well illuminated for several minutes, the pupils will gradually, but slowly, become smaller, but they rarely reach the size of a normal eye under similar conditions. In testing for the pupilary reflex, the patient should always be made to look at a distance, and one eye should be well covered while its fellow is tested. In exceptional cases the iritic reflexes may be present, but the power of accommodation lost. While in the case of loss of iritic reflex, the pupil may be, and usually is, smaller than normal, on the other hand, in the cases in which the iritic reflex is preserved, although it may be greatly lessened, and accommodation lost, the pupils are usually larger than normal. The loss of the effect on the pupils produced by pinching or irritating the side of the face or neck is rather unsatisfactory as in so many healthy persons this test will not cause the pupils to dilate. Inequality of the pupils is common.

Knee-jerks.—The loss of the knee-jerks is always suspicious of some organic trouble, either of the muscles, nerves or central nervous system, but absent knee-jerks alone is not sufficient on which to base a diagnosis of any morbid change, as this condition may exist in a few apparently healthy persons, but when the knee-jerk is absent and the patient suffers from shooting pains of the character described, and has loss of iritic reflex not due to adhesions of the iris, an almost positive diagnosis of posterior spinal sclerosis may be made. Of course, there are unclassified conditions, apparently due to degeneration of the central nervous system, in which one or all of these symptoms may be present. In these cases the trouble seems to be one between paretic dementia and posterior spinal sclerosis.

I have said nothing in regard to ataxia as an early symptom of posterior spinal sclerosis. In the majority of cases if the diagnosis is made early in this disease it must be made before ataxia can be detected. In some cases ataxia is an early symptom, but is probably never the only one present. When it can be detected it is usually one confirmatory in character from a diagnostic point of view, as the knee-jerks are usually absent, shooting pains present and the iritic reflex is lost.

A Normal Body Resistance is the Secret of not Taking Cold.

By Dr. Charles Denison, Denver, Col.

"The term 'catch cold,' is a misnomer. It should be, instead, 'catch hot,' for one has always been overheated or become relaxed (with or without unfavorable air surroundings) before the second part of taking cold comes, namely, the exposure. Exposure is just what we ought to be used to, but the fact that we do take cold shows that we are not able to endure it. If we were we would have natural resistance which would prevent it. So a cold is a punishment for breaking a natural law which we are too careless or stupid to understand.

"Given on the one hand a physique which is unresisting, due to defective body conditions, either inherited or acquired, and on the other hand atmospheric conditions which are unfavorable, such as a cold or windy air, the result is a cold. The skin which has been pouring out insensible and appreciable perspiration becomes chilled and the reciprocally active bronchial, throat and nasal mucous membranes take on the work and become congested. The 'stuffed up' condition, inflammatory symptoms, increased secretion, sneezing and coughing which result, make up what we call a cold. This is not the influenza or the grip, which is an epidemic disease which may attack anyone, those most easily who are least resistant, but it is a direct result of the susceptibility of the system attacked. An active, vigorous circulation does not allow this accident. One who is vigorous and under physical exertion does not catch cold. It is only when one is relaxed and receptive or clogged up in his circulation or defective in his nervous state that he or she is susceptible. A normal and healthy resistance is what we should have at all times. This can only come through correct habits and systematic exercise. There are good gymnasiums in this town, yet how few utilize them; probably not a thousand persons systematically and regularly.

"In the matter of the houses we live in, it does not seem possible that God intended we should choose the close, over-heated buildings we select as our abodes. Other animals thus deprived of fresh air degenerate and why should not man? I wish I could say something strong enough to the farthers and mothers in this town that would lead them to appreciate the question of a healthy temperature for night and for day in their houses in order that they, as well as their children, could keep up a healthy resistance to colds. The majority of living rooms are much too warm for reading or sitting in and sleeping rooms far too warm for sleeping. Compare a family with living in-door temperature regulated at a healthy point, 66 to 70 degrees Fahrenheit, and many another that I have been called to with temperatures from 74 degrees to 80 degrees Fahrenheit. You will find that the latter home is a hospital for colds.

"Compare the children who are habitually made to sleep in well ventilated rooms at a temperature not above 60 degrees, with those who sleep in furnace-heated rooms with windows closed, and, other conditions being equal, you will find the colds in the latter home. The children there are coddled too much and have no power to resist catching cold when exposure does come. Why, some mothers are so afraid of a draft or that the air will reach the bodies of their children that one would suppose, if they are right, that the Creator had made a mistake in not covering the youngsters with a coat of feathers! On the contrary to be inured to the air in which we are to live is the proper thing. I remember the late Dr. Agnew of New York, telling me he thought so much of the utility of the daily air bath in keeping off colds that he was in the

habit of remaining naked in his dressing room while he took his morning shave.

Ventilation in clothing so that the air, though changed, can reach the body, is too little thought of. I suppose we are most of us deceived as to the amount of wool there is in our undergarments. Most of the stuff hung up in shop windows is cotton. It gets soggy when wet with perspiration and in the quick evaporation in our dry air the latent body heat, which protects against colds, is easily exhausted. With all-wool undergarments, chosen as to thickness to suit the season and exposure, the case is very different—evaporation and inconductibility of latent body heat are both conserved. It pays, in less doctor bills, to put more money and care into underwear.

"Then, too, we need to exercise more judgment about our wraps. The man who after Oct. 1 always puts on his top coat to go down town on his wheel might better leave it at home half of our fall days, and even some of the winter ones. But he is not quite so improvident as the cyclist who goes out 'scorching' with the modern sweater on, or the woman who goes on foot shopping with the sealskin sacque at any time. The latter gets over-heated in the sunshine and in stores, only to take cold when she takes off her too-hot wraps in her own cooler house, while the cyclist becomes relaxed after his great exercise with no easy way at hand to get back to a normal resistance afterwards.

"The horse trainer has more sense, as he strips his animal for exercise and then puts on the sweaters afterwards.

"It is the old fault of making our bodies into hot-house plants just where we ought to toughen them to the cooler outside air. I remember now a cold and sore throat I had nearly all winter while teaching school in Vermont, just from wearing one of those abominable big fur collars. The evenness of clothing and wraps, so as not to have any one part over-heated and thereby make it weak and susceptible, constitutes a valuable provision to ward off colds.

"So likewise does toughening of the body's surface by the morning rub-down after a quick, cold, sponge bath. Finally we come back to the point from which we started, i. e., 'an ounce of prevention is worth a pound of cure.''

Antisepsis.

By James McD. Massie, M. D., St. Louis.

Modern treatment of disease is the outgrowth of modern research and clinical demonstration. Asepsis and antisepsis are the basic principles underlying the whole fabric of modern therapy, and they are the logical outcome of the "germ theory" of disease; but there are two questions relating to this theory of disease, which we may very properly ask: Why is there scepticism among some members of the profession and a steadfast faith among others? We answer the first question by stating, that many people will reject the *whole* of any proposition that is *partly* true and *partly* false. They reject the whole of the germ theory because there is much claimed for it which is not true. To answer the second question it is only necessary to glance at some of the facts presented in its history. While bacteriology as a science is new and undeveloped, its starting point dates back to an early period in the present century. At that time Appert published a paper upon the art of preserving animal and vegetable substances, by placing them in stoppered bottles and exposing these to the temperature of boiling water. Gay-Lussae discovered that as soon as these bottles were opened, especially if exposed to the air, their contents began to ferment. This led to the study of alcoholic fermentation. He found that oxygen was an indispensable factor in the process. About thirty years later, Schwann, by means of the microscope, discovered in fermenting substances inumerable minute bodies which possessed the faculty of reproduction and were present in the juices undergoing fermentation, but otherwise absent. He therefore concluded they were the exciting cause. He also found that if the air previously heated, was allowed to come in contact with the fluids of sealed vessels, no change resulted. This established the fact that it was something else than the air which caused fermentation. This discovery of Schwann's was later confirmed by Hemboltz.

In 1854 Schraeder and Dusch demonstrated that air filtered through cotton-wool, would prevent the fermentation of boiled fluids when it had access to them. This test showed that the process of filtration deprived the air of fermentation. Pasteur subsequently confirmed this observation. In 1870 Tyndall observed the presence of myriads of parasites in which, by demonstration, he showed effected unfavorable changes in organic substances. Pasteur, Tyndall and Lister now showed that heat as well as filtration would render these minute bodies inocuous. This discovery led to the sterilization of water and organic substances by boiling. Thus before bacteriology became a science, it was shown that these minute bodies, known as bacteria, were the agents of fermentation and putre-

factive changes, and were present in nearly every substance known to man. Fermentation and putrefaction, therefore, were the starting points from which the science of bacteriology emanated and when these processes were understood it only remained to connect them with disease in the human body. This was gradually accomplished first, by experiments on the lower animals and later on human beings. It was soon demonstrated that the nature of the infectious disease is one of fermentative and putrefactive changes in the fluids and tissues of the human body, similar to the changes produced in saccharine fluids by the yeast-plant. The connection of these processes with disease up to this time is chiefly limited to the symotic or infectious forms but their scope is constantly enlarging and where it will end, is a question that cannot now be determined.

From the foregoing statements it has been shown how putrefactive changes are brought about in organic substances outside of the human body. It has also been shown how these changes can be arrested or prevented. It now remains to be shown how similar putrefactive processes in the human body can be arressed or prevented. This task was first undertaken and accomplished by the celebrated Joseph Lister, and he may justly be honored with the title of "Father of Antisepticism." The antiseptic era abolished pus in surgery, and eliminated from the pathology of disease many of its most potent factors. He taught the necessity of antiseptic precautions in all surgical procedures and possibly, went too far in the details of its application. He believed the air was a prolific source of germ infection, and this belief led to the use of medicated sprays and the dissemination of carbolic acid vapors throughout the air of the operating room. These practices were later found unnecessary and at times injurious to the welfare of the patient and were mostly abandoned. Lawson Tait opposed the adoption of all the paraphernalia and complicated equipments of Listerism, and proclaimed the doctrine of asepticism or "soap and water" as a substitute. He believes it is better to prevent the access of germs to the body, than to try to destroy them after they have invaded it. However, Lister's pioneer work proved of incalculable service to those who followed him and modified his teachings. After having applied the principles enunciated by Lister to surgical practice, progressive thinkers directed their attention to the study of germs in their relation to disease, and the use of the antiseptics for internal treatment. Experimental research has now reached that point where the whole human family begin to appreciate its benefits. Disease hitherto incurable now yields to the new and improved methods of therapy.

As might be expected in any new discovery there is a wide difference of opinion in the medical profession concerning the pathogenicity of micro-organisms and their proper classification. It is no longer a matter of doubt, that some of them produce disease and some are inocuous, but to draw a line between the varieties and assign to each its special activity, is a different task. If this is the case with reference to the relation of germs to disease, it would naturally also be so in matters pertaining to the treatment of this class of diseases. The advocates of antiseptic therapy are divided into three classes: 1st, those who have adopted the method of serum therapy; 2d, animal therapy; 3d, vegetable and mineral therapy. These different methods are now legitimate snbjects for examination. First, what is claimed for them and what the grounds on which such claims are based. Serum therapy rests upon its alleged power of immunization. How it exerts this power is still a question which belongs to the domain of speculation. Antitoxins do not destroy germs nor preclude their growth, but are supposed to prevent their pathogenesis by neutralizing their toxicity, or in other words, they enable the body cells to endure the injury. Some observers believe that the injection of serum, in every instance, increases leucocytosis, thereby increasing the army of phagocytes for defensive purposes. Be this as it may, serum, as a therapeutic resource has achieved results which entitle it to a prominent place among the equipments of the progressive physician. The objections to its use are, that it has failed to justify the extravagant claims of its champions, and its inconvenience in application in general practice. The latter objection is not without force. In the first place, there is no fixed stability in most of the manufactured products, and they will keep only for a certain length of time. They must be kept at a certain temperature, or they will lose their activity. They are sometimes combined with antiseptics in the process of manufacture, this accounts often for their toxic effects. Their successful results depend upon judicious administration. Serum is a specific only for the disease or toxin for which it is intended. This disease or its germ cannot often be duly ascertained by means of the microscope, and its use involves delay in treatment and requires training which many physicians have not had the opportunity of acquiring. Even under the most favorable conditions, diag-

nosis is uncertain. Again we may have mixed forms of diseases which the serum would fail to reach. All of the above and many other drawbacks are in the way of its adoption in general practice. There is much evidence of a trustworthy character in favor of serum treatment, but there is so much indefiniteness connected with its composition and applicability to the treatment of grave diseases that it cannot be relied upon as a sole method of therapy. Animal therapy or the resort to animal substances in the treatment of zymotic diseases is supposed to rest on a physiological basis. 1st, it should antagonize pathogenic germs; 2d, it should distribute to its formal destination nutritive material; 3d, it should stimulate physiological functions by normal physiological processes. The evidence in favor of this theory is not conclusive. Nucleins, extracts of bone marrow, and the spleen, "cardine," "corelbrine," "elixir of testicles," extracts of the ductless glands, such as the thyroid body, the supre-renal capsules, thymus glands, etc., have lately been pushed to the front with the greatest commercial activity, but the diseases in which they have been used with any success are limited to very few, and even in these cases clinical reports are contradictory. There is every reason to believe, most of the therapeutic effects, claimed for this method, are due to psychical impressions. It is more than probable that animal therapy would never have reached more than a passing notice from the medical profession, had it not been for the prominent standing in the profession of those who endorsed it. How these substances prove remedial in medicine it is difficult to explain. That the extract of brain should exert an influence on the brain, or that the extract of brain should exert an influence over the sexual functions, is too absurd to be considered by any man of common sense. The only way that organic substances can antagonize disease is by increasing in the body the powers of resistance to disease. This, however, is not the main action claimed for animal therapy. The theory set forth by the holders of this belief is, that every organ selects something from the blood which it needs, and thereby leaves the blood more pure and freer from substances which might injure other organs. This theory furnishes an inadequate foundation for such pretentious plan of treatment to rest on. It must have broader claims for a basis, and must show better clinical results than have been recorded, before it can meet with general acceptance.

Vegetable and mineral therapy next claims our attention. There is no new fashion or fad in medicine. It reaches back to the early dawn of medical science, and has grown, side by side, with the growth of medicine. Vegetable and mineral substances are indispensable to the body in health. Why should they not exert a corrective influence on the body in disease? These substances supply all the tissues of the body with the material necessary to maintain health. When the organs deviate from normal, healthy conditions, why may we not utilize these same substances in a modified form. to restore these organs to a healty condition? If we turn to our elaborate works on materia medica and therapeutics, we find hundreds of pages devoted to a description of the therapeutic properties and uses of thousands of these vegetable and mineral substances, and perhaps a bare allusion to antitoxin serum drugs. The physician, in his daily rounds among the sick, prescribes these standard drugs because they possess a definite composition and produce definite therapeutic effects. He gets uniform results. His patients recovers their health. His successes, however, are not paraded before the public under flaming head-lines of the daily press. But let a sensationalist effect a cure with some new fad and the people will go wild with excitement, then the fake doctor is on the high road to fame. Very many of the drugs classed as tonics, antiperiodics, diuretics, purgatives, etc., are really *antiseptics*, for the reason that they antagonize the processes of fermentation and putrefaction, which are now known to be common causes of disease. The extensive class of diseases of a suppurative type produced by the staphylococcus and streptococcus are amenable to treatment by the above mentioned drugs as well as those of a more directly antiseptic character. Viewed from a practical standpoint these diseases of definitely ascertained bacteriological origin, are the most important that have yet been connected with germ pathology, including, as they do, furuncles, carbuncles, abscesses, erysipelas, puerperal septicemia, diphtheria, scarlatina, bronchitis, broncho-pneumonia, septic wounds, gangreneotitis, salpingitis, appendicitis, and many others not necessary to mention. In these diseases other germs may be found, but the pus microbes, above named, are the overshadowing pathogenic factors. In their treatment we are confronted with conflicting theories relating to germ pathogenesis and the defensive resources of the infected organism. We are placed in the attitude of a court of inquiry. We must weigh all the evidence submitted by trustworthy clinicians and then formulate our methods of procedure. Bacteria act on the animal organism by abstracting

from the body-cells oxygen and nitrogen which they appropriate to themselves; furthermore they furnish secretions and excretions which act injuriously upon these cells. It is these toxic principles that inflict the greatest damage. The microbe may be weak in toxin producing power, or the resistance of the cells may be so great as to successfully antagonize the toxin and defend the system against its injurious influence. This illustrates the principle of immunity in disease, which should determine the line of correct therapy to be pursued, immunity may exist in the body normally or be artificially established. Where the cells are already provided with the proper weapons of defense the system is fortified against microbic invasion and does not need extraneous aid, but otherwise we must come to its support with the best means at our command. The particular chemical agencies we are to select will depend upon the accuracy of our judgment in each case to be treated. We have innumerable resources, and it is our duty to make a judicious choice. If, as is generally believed, an antitoxin is not derived from a toxin, but that the toxin stimulates the body-cells to secrete the antitoxin, may not these body-cells be stimulated by vegetable and mineral substances, to secrete toxins for defensive purposes? If so, is it advisable to use these substances separately on their ascertained merit, or resort to a combination with a view of increasing their therapeutic effects? The science of pharmacy answers this question by producing synthetical preparations which exert a combined influence on the system, otherwise not so readily accomplished. For example, we may find a pathological condition in which there are indications for the use of arsenic, strychnine, iron and quinine. We are at a loss to know how to administer them, so as to secure the best effects with the least disagreeable consequences to the patient. The pharmacist solves the problem by combining them in tablet form, which is convenient to take and at the same time secures the highest degree of efficiency for each ingredient. The object to keep in view, when we make our choice of antiseptics, is to secure those which possess these attributes in the highest degree with the greatest exemption from noxious tendencies towards any functions of the organism. Besides it is desirable to have associated with the antiseptic qualities, other elements which will stimulate nutrition and promote constructive metabolism by means of which the inhibitory powers of the body-cells are increased. It is not always an easy task to obtain in suitable form the medicinal combination calculated to fulfill all the requirements of therapy in zymotic diseases.

A strictly ethical and scientific preparation manufactured by the Maltbie Chemical Co., of Buffalo, N. Y., under the designation of "Viskolein" has given me better results and approaches nearer a specific in septic and pyæmic disorders than anything I have yet found. Its antiseptic, stimulating and vitalizing effects in all forms of septic poisoning do not seem to be limited to the well known therapeutic action of its different ingredients, but exert a restorative influence on the vital energies of the system in a way which cannot be explained, but nevertheless, is confimed by clinical results. This valuable pharmaceutical preparation is composed of Kola and carbolized sulpho-borate of zinc, with menthol and thymol. It is prepared in the form of tablets, capsules and solution, to be used hypodermically or *per orem*. I first discovered its value in a case of typhoid fever in which the outlook appeared doubtful, although the patient, a male, had been skilfully treated by the usual methods. His temperature went to 105 degrees and remained at that point for over two days with only slight evening remissions. His pulse was, during this time, about 120; cerebral disturbances, with threatening pulmonary congestion indicated profound blood-poisoning. At this stage of the fever, being the seventh day, I commenced the use of Viskolein, which consists of tablets marked No. 1, capsules No. 2, and solution No. 3. I administered ten drops of the solution diluted with ten drops of sterilized water hypodermically in the lumbar region, in the morning, and repeated it twelve hours later. I also gave by the mouth a tablet and a capsule every four hours. No other medicine was given. I ordered a milk diet diluted with cold water. In twenty-four hours the pulse was 110, temperature 103 degrees. I now repeated the injection, with tablets and capsules.

On the morning of the 3d day the pulse was 105, temperature 101 degrees, the tongue was moist, the redness and glossy appearance were diminished, cerebral excitement had abated, respiration was normal, pulmonary congestion relieved, tympanites previously marked had disappeared. Continued treatment—diet, beef tea and milk. On the morning of the fourth day pulse was 90, temperature 99 degrees. All the symptoms were improved; fifth day the pulse and temperature were normal. I now omitted injection and gave only one capsule without the tablet every four hours. The patient went on to complete recovery without the least interruption. This being a

septic disease due to a germ infection, it could only have been aborted by the prompt action of the medicine on the germs and their ptomaines. The encouraging results of this test of Viskolein induced me to try it shortly afterwards in a case of scarlet fever. The gravity of this case was indicated by the first symptoms, persistent vomiting, due to the irritating impression of the virus on the medulla; temperature 106 degrees, quick, feeble pulse, intense headache, feeble capillary circulation, dusky skin, inflammation of the lymphatic glands and connective tissue of the neck. I commenced treatment by hypodermic injection of ten drops of the solution in same quantity of boiled water, morning and night, and gave a capsule every three hours. A gargle of boracic acid and water was freely used and nourishing drinks ordered. Improvement was noted after the first twenty-four hours and continued daily under the treatment; the temperature declined rapidly and continued normal, and the pulse became slower and stronger, the color changed to a bright red, the injected fauces, inflamed tonsils, and swollen glands rapidly assumed a normal appearance and the patient made an uninterrupted recovery.

The next case in which viskolein was tested was an obstinate eruption of the skin known as furunculosis. Crop after crop of boils appeared on various parts of the body of a male patient aged 45. I had resorted to the usual saline aperients, tonics and alteratives without the least benefit and concluded to try the remedy which had been so successful in the cases mentioned. I omitted the injection in this case and gave only the tablets and capsules, one of each every four hours. The effect was magical. Improvement was so rapid during the first two days that I omitted the tablets at the end of that short period and gave only a capsule at the same interval of four hours. In six days the patient was discharged. I have now used viskolein with the most satisfactory results in erysipelas, secondary poisoning from vaccination, carbuncle, impetigo, sothyma, septic poisoning in wounds and traumatisms of various kinds. While in some cases the results were not as prompt as in others I have never known it to fail in a single instance where it was judiciously employed. 3343 Franklin Avenue.

Why is Pneumonia so Fatal?

By F. R. Mallard, M. D., San Diego, Cal.

"The investigations of Putnam, of Boston, compiled from the statistics of Massachusetts, Glasgow and England, show that the mortality from pneumonia has increased almost five hundred per cent. in the last thirty years."—*Charlote Medical Journal*, Vol. 14, No. 3, page 299, and the editor says: "It seems astonishing and incredible." Incredible it is not, to one who for forty years has watched its steady rise to its present formidable proportions. Astonishing it certainly is, for every doctor knows, or can know, that if the patient is well housed, well watered, not overfed, and not overwhelmed with stimulants or depressants, the natural rate from uncomplicated, untreated pneumonia is about twelve per cent. The truly scientific doctor, who will select his pneumonia patients with as much care as the careful gynecologist selects his patients for serious operations can have a mortality rate almost, if not quite, as low as he has. My impression was that the increase had been between 300 and 400 per cent. in 50 years.

If there has been an increase, there must be a reason for it. The most pessimistic will not claim that the vital resistance to inflammatory or infectious diseases has decreased 500 per cent. in 50 years. If it had other diseases of a similar nature would show a similar increased rate, which they do not, and pneumonia is so far in the lead that there is not even a poor second. Nor will the most rabid microphobist claim that the pernicious pneumococcus has increased 500 times in size, or 300 times in virulence during that period. If then the reason is neither in the cause of the disease, nor in the patient, it must be in the treatment that the patient receives. It makes one's "angry passions rise," to hear a sleek, well groomed professor, glorify the high and holy office of physician, and descant on the sanctity of human life, and then advise a class of students to pursue a course of treatment that will result in the loss of three to five lives, of which death unaided would have got but one.

About 1880, some figures were sent to me on a leaflet (the author's name is forgotten), which it was said were taken from the records of the Massachusetts General Hospital, giving the total number of patients treated in that hospital for the 40 years between 1791 and 1830. The mortality rate was said to have been fairly uniform at about 8 per cent. I have no way of knowing the truth of these statements, but from the fact that a modified form of the treatment those patients received has, for the last 40 years, had practically the same rate of mortality, inclines me to believe them correct. This plan of treatment is based on the fact that there is an *inflammation to be controlled*. In the hospital, as soon as

the diagnosis was made, the patient was bled, regardless of his age or the stage of the disase, and if the fever continued higher or longer than usual, the bleeding was repeated, and sometimes more than once. Then an adult got 5 grains of calomel every four hours for four doses. This was followed by a saline or black-draught, and this by Dover's powders as needed. Not the degenerate, emasculated compound the U. S. P. calls Dover's powder, but the powder devised by Dr. Dover.

I am almost certain that the editor has never used this powder in treating his pneumonia patients, or he would not have named morphine as the opiate of choice. Dover's powder is not generally kept in drug stores, and is difficult to make, and for 30 years or more I have used a modified Dover's powder, the diluent being powdered saltpeter. An objection to it is, that under some conditions of the atmosphere it is deliquescent. But it can be put in five grain capsules and is then fairly permanent.

In this connection it may not be amiss to record a bit of knowledge got in the Mississippi Valley. In that locality a patient sometimes has both pneumonia and ague, and if he is given two of these capsules every four hours for six doses, the ague will be broken as surely as if he had taken 24 grains of quinine, either in one dose or in divided doses. If it is certain that he will thus get too much opium, one capsule may be given at a dose, and between them eight grains of saltpeter, and so far as the ague is concerned the result will be the same. I will confess that, at one time following the advice of some eminent German and Italian doctors, I, against my own judgment, gave such patients large doses of quinine, but the results were so disastrous that I have since looked with suspicion on, and hesitated long before adopting any treatment, *made in Germany*.

Since 1858 I have been firmly convinced that the ideal treatment is by the application of ice. Provided, ideal surroundings, and ideal attendants, can be had. This plan was, so far as I know, first proposed and applied by that embodiment of courage and scientific common sense, Dr. Hiram Corson, of Pennsylvania. The absolute impossibility of securing these conditions has prevented me from following it, except in a few cases, and in these there was no mortality rate.

Much the longer and larger part of my active practice was in a latitude where every winter I was certain to see one or more of my pneumonia patients, at my morning visit, with his head on one end of a pillow and the other end on which water had accidentally spilled sheeted with ice. Even under these conditions I found it an eminently *curable* disease. The doctor who, with such surroundings, would prescribe the local application of ice, could certainly be said to have the courage of his convictions, if he had nothing else. Not only is pneumonia the one disease, the mortality from which has notably increased, it is also the disease the treatment of which has been most radically changed, and paradoxical as it may seem, the increased mortality from it is mainly due to the rapidity with which discoveries were made in those sciences which are at the foundation of medical knowledge, chemistry, physiology, biology and microscopy during the 50 years prior to 1840. Every great discovery in one of these sciences requires us to revise and reform our ideas and theories about this science, and to a greater or less extent about each one of the others also. The advance made in these sciences during that period will compare with what was previously known about the same as what we know now, compares with what was then known. It will not greatly stimulate self-esteem, to remember with what halting and erratic steps we adjusted ourselves to recent scientific discoveries. You know our neighbor (of course *we* never did anything of the kind) loaded his pocket-case with antipyrin, and then shouted to Herr Eberth to bring on his bacillus and let him raise temperature never so high, he could knock it out in the first round. And he did it too, and when the patient died it was heart failure, kidney failure, great toe failure, or collapse. But if the beautiful goddess, who is found at the bottom of a well, had been asked the cause of his death, she would have said it was because the doctor failed to use all the common sense that the fates had allotted to him. And when it was discovered that the reason so many bottle-fed babies died was because cow's milk was loaded with bacteria, and that sterilizing killed the bacteria, we knew that we had found the ideal food for hand-raised babies. And notwithstanding many an old dutch granny declared that "boiled milk was not good for babies, only sometimes," we fed it to them until we had slaughtered 10,000 times as many innocents as were ever born in Bethlehem of Judea, and so completely out Heroded Herod that the shade of that monarch hid its face for very shame, and all the time we *knew* that the man in the laboratory, who could raise microbes, knew more than the woman who could raise babies.

It would not be prudent to mention some other discoveries which are just as imperfectly understood, and just as thoroughly

misapplied as those were, for the decree has gone forth that he who doubts is incapable of scientific reasoning, and he who disputes shall be put out of the synagogue. Our short-comings should make us lenient in judging the men of the earlier times, for they had all the difficulties we have, and during part of their time there was such social unrest, and political upheavals, as the modern world had never known. And as if the gods had determined to bewilder and utterly overwhelm them, they in addition unloaded on them magnetism, mesmerism, hahnamanism, with other pseudo-scientific isms, each one, perhaps, having a few grains of illy understood truth, and each one clamoring to be admitted into some system of practice, and if refused made the basis of an independent system, and such is the inherent tendency of pneumonia to end in recovery, that under favorable conditions each one can show a mortality rate that is not to be despised. It is not strange that many were seduced and led away from the true faith. A few steadfast souls held fast to sound doctrine until death.

That the stampede of a host of pigmies may carry a giant from his mooring was shown in the case of the elder Gross. A man who gave honor to, and received honor from, the profession throughout the world. While he was still in full possession of his splendid mental and physical powers, he publicly declared that so often had he observed the curative action of venesection, when he had been treating patients for pneumonia, that if he should ever have that disease he would want to be bled. He did have it, was not bled, and was buried. There is every reason to believe that if he had been treated with the same scientific skill with which he had successfully treated hundreds of patients, the lancet would have added as many years to his life as the fig poultice added to the life of Hezekiah, king of Judah.

Epilepsy Dependent Upon Intra-nasal Disease.

By Walter A. Wells, M. D., Washington, D. C., Physician in Charge of Throat and Ear Diseases, Garfield Hospital; Assistant Attending Physician, Episcopal Eye, Ear and Throat Hospital; Demonstrator of Laryngology University of Georgetown, etc., etc.

While not going to the extent of maintaining that epilepsy can be produced *ab origene* from diseases within the nose, the case cited below is at least another instance to be added to those previously reported of a cessation in attacks of epilepsy, following intra-nasal treatment.

It is not a question of the existence of an inherited diathesis or of an acquired abnormality in the central nervous system.

Such a general state in fact seems always to exist. It is just because there is this weakness or instability as we believe, especially on the part of the vaso-motor sympathetic, that every source of irritation which might be thought to have some connection with the symptoms should be removed as soon as recognized. It may be at times the nose, at another the ovaries.

The relief of phimosis and correction of astigmatism have been practiced with equally good results in epileptic disease, and the *modus curandi* has been in both cases the same.

The organs containing, like the nose, erectile tissue, and those in the most intimate connection with the sympathetic, appear to give rise more readily to reflex trouble than any others. If we take the skin, naso-bronchial mucous membrane, the reproductive organs, and perhaps, also, the bone medulla, we shall see that the largest number of reflexes both originate and fall upon these organs.

They form, as it were, a kind of sympathetic chain, a disturbance in one easily gives rise to a disturbance in the other. It is to be remarked that it is particularly in these organs that the eosinophiles are discovered which agrees with our previously published views upon the pathogenesis of the nasal reflex neuroses. (Philadelphia Med. Journal, Aug. 20, 1898).

It ought not to surprise us in the least to find epilepsy of nasal reflex origin, seeing how many points it has in common with well known reflexes, such as asthma and migraine. Like these it is distinguished by recurring paroxysmal attacks, and generally unaccompanied by palpable structural charges (if we except the atheromatous arteries seen in all). It resembles them further in that the attacks are accompanied with increased uric acid excretion, and may be provoked by emotional states, and disorders in the reproductive system.

The following case observed by myself presented characteristics of true epilepsy:

S. W., colored, aged 44, janitor, applied at Emergency Hospital, April 1st, 1898, for treatment of the nose. Questioned as to family history, learned that the mother suffered from migraine, a sister died with heart trouble which, from description seemed to be angina-pectoris.

The patient has had acute articular rheumatism, and twice la grippe. Since first attack of latter in 1887, he suffered with nasal trouble and pain in the head. In the right nasal fossa, there would collect quantities of purulent secretion, most abundant in the morning and very offensive. The headaches, which have been very intense, are located chiefly in supra-orbital, temporal and occipital region.

For ten years he has suffered with typical epileptic seizures. Were not preceded by an aura, but were accompanied by deposits in the urine, and followed by sleepiness and mental depression.

They occurred on an average of once a week, and never of longer intervals than two weeks, and always brought on upon catching the least cold in the head. Examination of the nose disclosed the presence of polypus and likewise of pus in the middle meatus, the latter, as proved by an exploratory puncture through the nose, coming from the antram of Highmore.

April 6th operation was done of removal of polypus, and a week later I made an opening into Highmore by drilling through the alveolar process at the situation of the first molar, which was absent.

May 15th, patient reported that since first operation has had but one epileptic attack, and that very light. He thinks he is cured because a severe cold he caught during the time did not bring on a seizure as it had done always formerly.

The patient about a month later was still immune from the attacks; after then he was lost sight of.

It may be thought, that possibly the operation for antrum empyema in the case, was that to which to attribute the cure of the epilepsy. But we think, inasmuch as improvement seemed to date from the time of the removal of the polyps, and remained in spite of continuance of suppuration from the maxillary sinus, and since further we have precedent for the dependence of epilepsy upon intra-nasal disease and not, so far as I know, upon maxillary sinus disease, that the former can be given without much hesitation.

We would call especial attention to the following points illustrated in this case, the beginning of the nasal disease with influenza, the correspondence in duration of the epilepsy with disease of the nose, the circumstance of a cold in the head precipitating the attack, and the cessation after such a long standing (ten years) following the simple operation of the removal of polyps.

The family history in the case, illustrates also an observation I have frequently made, namely, that if we have a patient suffering from one of the four affections, migraine, epilepsy, asthma, or angina pectoris, some others of the same group will be discovered in branches of his family. This patient's mother suffered from migraine and his sister, in all probability, from angina pectoris.

The patient himself had had articular rheumatism, noteworthy in this connection as what the French authors term the arthritic diathesis, frequently exist in the class of nasal reflex neuroses.

The Action of Somatose on the Mammary Glands.

A Review of the Literature on this Subject, by Dr. Felix Heymann, Berlin.

Dr. R. Drews, of Hamburg, (Centralblatt fuer Innere Medizin, No. 23, 1896) reports that the observations first made by himself as to the favorable action of somatose upon the secretion of the mammary glands in nursing women, had been confirmed by two other authors, namely, Wolfe, of Philadelphia, and Taube, of Madrid. Wolfe noted that under the administration of somatose to nursing women whose secretion of milk became arrested at an early period, a prompt and complete restoration of the secretion was obtained, while Taube, on the ground of a single, but very instructive observation, expressed the opinion that somatose possesses great value in the nutrition of children. Drews has observed 25 cases, of which four or five are briefly described. On the ground of his experience he reaches the following conclusions: That somatose exerts a specific effect upon the mammary glands of nursing women, produces an abundant secretion of milk, and rapidly relieves the disturbances due to the arrest of the flow of milk. The dose recommended was one teaspoonful, three to four times daily in a cupful of warm milk, soup, or cacao, etc.

Lewy, of Berlin, (Medico No. 51, 1896), was able to demonstrate in the very first case in which he ordered the preparation, that somatose manifests a marked stimulating influence upon the lacteal secretion. As soon as this preparation was discontinued, the quantity of milk diminished even when the other food, and especially the supply of fluids, remained unchanged. This phenomenon appeared so regularly and distinctly that the young mother in the interest of the child soon would not consent to the somatose being discarded. Although this did not happen in every one of his later cases, in the majority the action of somatose upon the flow of milk was un-

mistakable. Yet, unlike Drews, Lewy never succeeded in stimulating the lacteal secretion in cases in which all signs of its cessation were noticeable.

Lutaud, of Paris, (Journal de Medecine de Paris, No. 15, 1897) administered somatose to two women who, owing to the premature appearance of menstruation, had lost their supply of milk, with excellent results, that is, the reappearance of an adequate secretion of milk. In another case the preparation produced diarrhœa when the daily dose of four teaspoonfuls was exceeded. In one of the five cases first mentioned the patient, a vigorous woman, suffered from severe mental depression, associated with suppression of lactation. After taking somatose for a week, the mother was again able to nurse the child. Nine months later she again became pregnant and was no longer able to nurse the child. The author, however, says nothing further with regard to the condition of mental depression, but it may be assumed that with the return of lactation the psychical equilibrium was restored.

Drews, of Hamburg, (Therapeutische Wochenschrift, No. 45, 1897) reports 100 personal observations and about fifty made by colleagues, all of which confirm the favorable effects of somatose upon the mammary secretion. Further, he gives a few brief reports received through correspondence with a number of physicians who had employed somatose for the above condition. These results are also in general favorable. Drews more recent observations confirm his earlier conclusions that it is possible, even when all signs of arrested lacteal secretion are present, to restore the flow in a sufficient manner by the administration of somatose, provided that the breasts are properly developed and no disease exists to prevent the mother from nursing her offspring.

Lieber, of St. Andreasberg, (Der Kinderarzt, No. 86, '97,) observed in one case a very distinct effect of Somatose upon the secretion of milk. A somewhat emaciated woman who had been married about four years, was nursing her third child. After a few months the flow of milk ceased, but under the administration of Somatoes, one teaspoonful daily, the secretion not only became considerably augmented, but continued under the use of the same dose, so that the child could be nursed until the tenth month. The breast then shrank to a remarkable extent, whether dependent upon the remedy, or as a consequence of hypersecretion, the author is unable to state.

Fuchs, of Bleistadt, (Die Heilkunde, No. 8, '98,) reports the following observation: The patient, who was much debilitated after pregnancy, owing to a typhoid pneumonia, had entirely lost her secretion of milk. As she refused all nourishment, she was given Somatose, 10.0 gm.†, thrice daily, for a period of six weeks. The preparation, unlike the other food, was not vomited, but well tolerated, the appetite soon increased as well as the bodily weight, and the almost arrested mammary secretion.

Joachim, of Berlin, (Centralblatt fuer Innere Medizin, No. 10, '98,) had under observation 15 cases, of which three are especially described, and formulates his results as follows: In a majority of cases, there was an improvement of the appetite, the general health, and a quantitative and qualitative improvement in the lacteal secretion of nursing women. In a few, although in the minority of cases, even the prolonged and regular use of Somatose proved unsuccessful. The preparation, however, should not be condemned for this reason. The practitioner must make use of the most divers remedies, even when here and there a failure takes place. Hence Somatose will be indispensable in conditions where it is desirable to influence the mammary secretion of nursing women. In contrast to Drews, however, Joachim does not regard the action of Somatose upon the mammary glands as a specific one. He has observed, indeed, that the mammary secretion of nursing women is favorably affected only in cases, in which an improvement of the patient's appetite and general condition is simultaneously brought about. On the other hand, in cases in which the organism was not influenced by Somatose, and the general health remained bad, the mammary secretion was unchanged. In Joachim's opinion, therefore, successful results from Somatose cannot be expected in all cases, although in the majority, because this preparation exerts an extremely beneficial influence upon the general health. In conclusion Joachim states that it would be interesting, if experiments were made to determine whether, if Somatose is given in the last months of pregnancy, it would influence the secretion of milk of the mother after the birth of the child.

With reference to this point, the reviewer would refer to Drews' first article. Of the five personal observations made by this author, Case three is described as follows: A woman, 28 years old, who became strongly anæmic in consequence of four rapidly succeeding pregnancies, and had been able

†This is evidently an error as apppears from the observations previously made, the customary dose amounts to one level teaspoonful, three to four times daily.

Directions for the Use of

BLENNOSTASINE.

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to nurse her children only for a period of two or three weeks, was given Somatose during the last months of her fifth pregnancy, after which the breasts increased in volume, and after the birth of the child an abundant flow of milk occurred, so that the mother was able to nurse her child without any trouble until the sixth month.

This case, therefore, is of interest with reference to the question suggested by Joachim as to the prophylactic application and utility of Somatose. According to the reviewer's opinion the subject of prophylaxis has not in general received the consideration which it deserves in view of its great importance.

In connection with this review by Dr. Heymann which appeared in the Deutsche Medicinal Zeitung Nos. 59 and 63, 1898, Dr. Dengel, of Berlin, reports from his practice the following additional case which was the subject of accurate observation. The patient, a woman, 35 years old, IV para, during the early part of lactation, had enjoyed excellent health and had an abundant secretion of milk. Soon, however, as in every one of her previous pregnancies a continuous flow of milk occurred, and in spite of an abundant supply of proper nourishment, the child did not increase in nutrition, but retained the same weight as at the end of the first four weeks. The energetic administration of Somatose effected a change in both directions. The flow from the breasts ceased almost completely after two or three days, and the child showed an increase in weight and an excellent general development. The mother also felt in much better health than she had been in her previous pregnancies.

Dr. Dengel believes that all this is to be attributed to the administration of Somatose, and that his observations should encourage others to make further use of this preparation.

Artificial Stimulation.

This is a nervous age. Rapid development has made the nervous system highly susceptible and unstable. The strain and pressure of modern life, acting upon this increasing sensibility, causes so much suffering, men instinctively look around for artificial stimulants to benumb it. Alcohol, opium, cocaine, coffee, tea, tobacco, sauces, condiments, and large quantities of stimulating food are used to relieve the very conditions for which they are largely responsible. All artificial stimulants and unnecessary food, in health, create excitement, uneasiness, and extra work in the system. If the individual feels better after indulging in stimulants, it is either due to temporary paralysis of the nerves of sensation, which, like sentinels asleep on duty, fail to report to the brain the damage done by the enemy, or else there is a reckless expenditure of vitality, which the individual can ill afford.

The habitual and excessive use of artificial stimulants is liable to cause disease of the vasomotor system of nerves, chronic congestion of the brain and viscera generally, followed by inflammatory or degenerative structural changes in the blood-vessels and other organs, often terminating in apoplexy.

All nervous energy generated in excess of that needed for the performance of function should be utilised in work. It should not be stupefied by narcotics, wasted in high and reckless living, or turned in upon the brain to ravage the system with worry, according to the individual temperament. The unrest, the acute and painful consciousness of which neurotic persons complain, may be forgotten in light, suitable, and varied work. Habitual work has specialised all our organs, and temperately performed, it will give stability to the higher nerve centres. The neurotic person's salvation lies in cultivating his individuality by thinking and doing, and in the strictest observance of temperance and moderation. If he must have artificial help, give him some mild nervine, which will not lead to formation of a drug habit, or cause depressing reaction.

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All papers will be passed upon by a Committee to consist of three members of the New York Neurological Society, and the award will be made at the annual meeting of the Board of Managers of Craig Colony, October 10, 1899.

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Manuscripts should be sent to Dr. Frederick Peterson, 4 West 50th St., New York City, on or before September 1, 1899.

THE

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DYSPEPSIA.

Of all the diseases to which human flesh is heir, probably none occurs with greater frequency than dyspepsia. From the infant at its mother's breast, to the old man looking through the "silvery rings of the *arcus senilis*"—the rich, the poor, the learned and the ignorant—all have at some time, or will, sooner or later, become its victims. Growth and repair are the chief functions of physical life and consequently digestion and assimulation must be regularly and constatnly performed or serious loss results which may even place our life in jeopardy. Nutrition is a very complex process and many of its steps are not as yet thoroughly understood. Therefore, it is not strange that either temporary or serious derangements in the delicate machinery of nutrition should frequently occur when we consider how often we heedlessly thrust obstructions in its cogs or close all vents with full steam on. And it is a matter of common observation that many people appear as if trying, with utmost diligence, to embarrass as much as possible, or to completely wreck the intricate mechanism of their bodies or the healthy activity of their minds by continually disobeying all known and well-established laws of health.

Although epidemic at all times, simple dyspepsia is attended with absolutely no danger to life. But when occurring with other diseases it may become a most serious complication, and the necessity for adequate nourishment in all chronic complaints is recognized by every one. The laity look upon dyspepsia as of little consequence except for the discomfort or pain which it produces, and physicians often dismiss the milder cases with scant courtesy as "a little stomach trouble." But of late the subject of auto-intoxication with its attendant dangers has incited fresh interest in the digestive act, and numerous investigators are now studying the question with a zeal which promises great results

Thus far we have spoken of dyspepsia as a distinct disease; but such is not the case. Dr. Clarence King has recently called attention, in the New York Lancet, to the fact that "dyspepsia" is a generic term which may be applied to any disturbance in digestion from whatever cause. Thus, it stands in the same relation to the economy as "fever," or "pain," or "headache," does—a symptom of disease and not disease itself. It may be a symptom of either organic or functional disorder of the stomach, or it may occur as a neurosis, pure and simple, or referred from some distant organ. By common consent the term is now seldom used by our leading writers, except as it refers to the purely nervous or atonic form of the disease. With the qualifying adjective its use may be admissible, but even here scientific accuracy seems to demand that it should be dropped in order to remove another stumbling block to simplicity of nomenclature. Used alone it expresses nothing upon which a scientific physician can base his therapy. No one rests satisfied with a diagnosis of cough without looking beyond to ascertain its cause—whether due to tuberculosis, to pneumonia, or to simple bronchitis; and so it should be with pain, with nausea, with headache, with dyspepsia, and the other general symptoms of disease.

It is generally believed by the people that dyspepsia is difficult to treat and almost impossible to cure. Doubtless this is due to the empirical manner employed by the older physicians and continued by too many at the present time. If physicians would give more careful study to these cases and discriminate accordingly in their selection of remedies there would be fewer failures in treatment. The time-honored drugs, pepsin and hydrochloric acid, have long been our chief agents for the relief of digestive irregularities. But as our knowledge of these diseases increases, so do the means which we have at hand to combat them multiply. Already several new drugs have been added to our resources, while many old ones have been brought forward as valuable adjuvants in appropriate cases. Of these we may mention, as the most valuable, pancreatin, ingluvin, diastase, the alkalies and the various antiseptics, of which hydrogen peroxide, or glycozone, may stand as the type. But many other remedies are often of value, either alone or combined with the digestants, as nux vomica, gentian, iron and arsenic.

Two other remedial agents employed in dyspeptic diseases deserve mention on ac-

count of their importance and the favorable results which they often produce. We refer to lavage and the application of electricity. The former of these was introduced about ten years ago and immediately met with such great success that its use in catarrhal troubles has become almost universal. Electricity is of still later introduction. It may be applied either through the skin or by the intra-gastric method. Good results have been obtained both ways, but undoubtedly the latter method is preferable. However, this, like lavage, is open to the serious objection that a tube has to be introduced into the stomach, which is apt to cause severe retching and vomiting.

ABOUT MEDICAL EXAMINATIONS FOR LIFE INSURANCE.

Considering the fact that there are a number of books treating on this subject, of rather more than the bulk and formality of the monograph; and also that most life companies and benevolent associations print more condensed forms of instructions for their examiners, it might seem that there now remained but scant room for advice, or that it could but fall on ears dulled or deafened by much reiteration. Still a glance at such mortality tables as are open to the public shows that if the last word which can be said on the subject has been said, it has been said to but little purpose to some examiners, to judge by the net results in protection to the associations whose interests they are supposed to guard.

The vital statistics of regular life companies are not easy of access to the general public, unlike those of the benevolent associations, which are open to their membership and consequently to the world. It is fair to suppose that the former may make a better showing than the latter, as the old line companies are not so apt to leave the selection of examiners to traveling agents, whose profits depend somewhat more on the number than the quality of the risks they secure. Again, having chosen their examiners with care, the most of the old companies pay them a fee commensurate with their responsibilities, and the time and skill involved in the careful examination of applicants; whereas custom or competition fixes the fee of the examiner for the benevolent society at 75 per cent. less.

It is not pleasant to consider how far this last fact may account for the quality of the work done, for we like to believe that physicians, of all men, will do to the best of their ability what they consent to do, whether they are paid little or much, or not at all, for it. Still it will not do to forget that there is a strong element of human nature even in physicians, and that they are not wholly insensible to the recognition of the importance of their services, as indicated by that most sensitive of criteria—compensation. But making all due allowance for this, which cannot be large, and also for the careless or dishonest choice of examiners, there still remains a large amount of relatively bad work that has to be accounted for in other ways.

When the earlier mortality tables were published, and it was found that a startling number of deaths from tuberculosis, Bright's disease and the like, occurred within a few years, or even a few months, of the time when the insurance was taken, it seemed like a grewsome accident; but as these reports appeared month after month and year after year and the same startling fact appeared in each and all, it lacked the character of an accident, and took on the form of a law of risk grave enough to invite study and investigation. And since it is, or at least seems, a law of risk, the great question is: Is it, like certain ancient laws we read of, irrepealable and unamendable? One dislikes to believe it is both, and yielding the first, perhaps, will strenuously deny the last.

There are difficulties in the way of ideal examinations more than those hinted at in the foregoing lines, but they are not insuperable, and at a future time some of them, not sufficiently considered in the past, as it seems to us, will be pointed out. Meantime it must be asserted that they are not—they must not be, difficulties measured by so many dollars per examination.

LACERATIONS OF THE PERINEUM.

We still meet an occasional practitioner of years of experience who has "never had a case of laceration of the perineum."

To such a one we should invariably put the question: "Have you in every case of confinement you have had, inspected the perineum carefully, after delivery?" The army of crippled women in the wake of such a physician is a sufficient commentary on his carelessness. The frequency of lacerations has been variously reported. Liebman in 1064 cases of labor observed lacerations in the proportion of 15 and 9-10 per cent. Mewis in 1095 cases, 19.8 per cent. In some cases laceration is preventable by pressure of the hand upon the head, retarding its progress and allowing the perineum to become gradually distented. The best of all means of prevention is the administration of chloroform to the surgical degree, particularly during the termination of the second stage of labor. If the head hangs long upon

a thinly distented perineum, lateral incisions should be made to the depth of ¾ inch. Despite the utmost precaution, a certain per cent. of inevitable lacerations will occur. Repair of the torn perineum by suturing should be done in every case within sixteen hours after delivery. With thorough aseptic precautions, union by first intention ought to be the rule.

In ordinarily skilled hands a most severe tear should not require more than from 15 to 20 minutes for restoration. Most women will submit to the operation without an anesthetic. In exceptional cases minor anesthesia, with chloroform, can be safely secured without the assistance of a second physician. Every obstetrician should become an adept in repairing a torn perineum. The technique is not difficult to learn, and when once acquired will well repay the effort made.

When we consider all the possible sequelae, immediate and remote, resulting from a neglected tear, the importance of attention to this subject becomes obvious.

THE PSYCHIC ELEMENT IN THERAPEUTICS.

The influence of the mind upon the conditions of the body is a subject which is attracting unusual attention among medical men at the present time. Several causes have had an influence in producing this result.

First of all is the general interest which observed psychic phenomenon have aroused among thinking people of all classes. It has compelled physicians, as a matter of ordinary intelligence to look into the matter as best they could, however imperfect their examination might be. The phenomena, for instance, of double personality, of hallucinations, and of thought transference are all matters of general interest with which the physician should be aquainted, for they all have a bearing more or less direct upon his work.

Then the popular movement in connection with "mind cure" is of special importance, not only as a matter of truth or error but in its influence upon the financial success of the physician as well. That cult under various names is assuming gigantic proportions and is an element to be reckoned with as affecting the physician's *clientele*, quite as much as the free treatment "habit" at clinics' hospitals and dispensaries. It is easy to elevate the eyebrows and cry "humbug," but these people claim cures; they have facts to show and people can see them; wise physicians therefore are beginning to enquire seriously what the secret is of their occasional, at least, if not usual success. The same scorn was evinced by the profession generally toward homœopathy forty years ago; but in time it became evident that in certain diseases, as for instance some forms of fever and especially in the eruptive diseases of children, the homœopathic practitioners had marked success; and some wise physicians instead of continuing to mock and deny, began to cast about for some rational cause for that success. In that investigation the large class of self-limited diseases was differentiated—diseases many of which ran their course safely if let alone, and were not favorably influenced to any appreciable degree by medication. It was discovered that hygienic measures and good care, without medicine of any kind, gave results identical with or even superior to the homœopathic practice, and far superior to the old methods. A lesson was learned which has been of inestimable advantage to the science of rational medication, an advantage which the younger members of the profession can hardly appreciate.

So the wise physician now, instead of continuing to scorn and deny will carefully consider wherein the success of these various self-styled "scientists," the Christian scientists, the mental scientists, faith curists, and all that class of healers, consists. Their ignorance is generally dense and proverbial, and often proves the cause of such unmitigated blundering as to constitute crime, for they undertake the management, or rather the cure without management, of disease, without any knowledge of its nature, origin, course, or natural termination, nor even of the organs affected—and yet in certain classes of diseases they have undoubted success. Their methods and results then should be studied and the physician who observes intelligently will become convinced that, in some cases at least, disease is influenced by the mind to a much greater degree than he had before been accustomed to suppose.

Again, the subject of "suggestion" either alone or in connection with the hypnotic condition is calling attention in a remarkable manner to the influence which the mind exerts upon the functions of the body both in health and disease.

This is not the place to elaborate a subject of the importance which this is bound to assume in the near future, but it seems appropriate to suggest that without abating one jot of effort or enthusiasm in the search for new remedies or work in any other department of medical science which can add dignity or usefulness to the profession, a wise consideration of the psychic element in therapeutics should not be neglected.

THE DOCTOR AND THE BILL.

"A wise physician, skilled our wounds to heal,
Is more than armies to the public weal."

This is a poetical, but very truthful sentiment. My text, the Doctor and the Bill, is a homely one, but from it may be rung on the thin air thoughts which come daily to the man of powders and pills, as the naughty need of pelf often checkers the spring of his existence.

'Tis a subject about which much has been written, yet the problem of how to make the gentle folk pay the medical attendant for his science and trouble, promptly and cheerfully, I am afraid is a lost art. Every plan and every well-devised expedient, so far as I know, has fallen flat and proved unprofitable. While my convictions are strong, I will be quiet along this line, as I wish only to briefly say what should be done and not how to do it.

The physician's bill should be a debt of honor. A few, the honorable exceptions, so regard it, the masses do not—that is they relegate it to the rear, and after paying the butcher, the baker, the candlestickmaker, and others whose wares they must have, then if there be a balance in the exchequer and they are importuned at regular intervals, they may, grudgingly, square with the doctor. This is an everyday experience.

The profession of medicine is the noblest of them all, but as a business, especially with the general practitioner in the country, (at least in this part of the moral vineyard) more is expected from it than the "creature comforts," the practitioner labors under a delusion and a snare. The novices are always fooled. The doctor is not appreciated; he is "too numerous." Were there but one in a township how god like would he be!! He dutifully attends, in every wind and weather, all classes of people; he lays self aside, self-abnegation is his motto; to save and to succor is his devoutest work, and to bring back to health those entrusted to him. His life is consecrated to the attainment of the greatest usefulness and yet from a financial view how barren are the results.

My Jeremiad leads me into this thought: No intelligent community ever values the physician higher than he estimates himself. If he works for nothing, underbids his brethren, breaks faith with the schedule of fees to which he has promised faithfulness; if he is "playing before the galleries", acting the Samaritan on one hand and Uriah Heap on the other, for obvious reasons present his bill for months after the service has been rendered, then in a patronizing way, he may flourish for a season in that self-same respectable community, but his days are numbered, and another people upon whom he may practice the Black Art must be sought.

The conscientious doctor, *per contra*, is loyal to his guild; he charges according to the service he has performed, and believes that the collection of his bill is a matter of common decency and common honesty, and is of pressing importance to him, not only to retain the good will of his client, but to enable him to pay "spot cash," which of itself is a passport to good practice and to good society.

The possession of a little lucre makes him more manly and a better doctor; it gives him an air of ease, elegance and assurance which the unbusiness-like brother, who does not press his business cannot assume. The moral is simple.

In winding up this scrawl, which has omitted many things for want of space, we would not have the doctor omit one jot or tittle of his science and enthusiasm in the alleviation of the ills of the people—poor and rich alike—let him be absorbed in his work, in absolute veracity of thought and action, but let him not sink all pecuniary advantage, for the laborer is worthy of his hire.

LEGISLATION ON THE MARRIAGE QUESTION.

Quite a number of our States already require a license to marry, and impose heavy penalties on both minister and principals for any irregularity in the matter of the application.

The different commonwealths have different qualifications as to age, &c., but in every one of the States having such regulations any inhabitant can secure a license to marry regardless of mental, moral, or physical fitness to assume the duties of paternity. Some, forsooth, require the consent of parents when *children* make application for license; or in lieu of such consent accompanying the application when there is any doubt of the age of the parties in question, their affidavit is sufficient. The evils resulting from such an arrangement are patent to all, and especially to those who personally view the operation of such laws. To the intelligent listener in the average license court, the hum of voices making affidavits seems a weird and ominous music. The syphilitic, venereal wreck, consumptive, and epileptic, the feeble minded and the dipsomaniac stand before the bar of the State, with a brand as plain as that of Cain upon their brow, and asking, receive unchallenged, permission to legally procreate their tainted species.

The well balanced mind reels with horror at the spectacle, and already efforts are being made to remedy the evil. Numberless sacrifices must be made and years must elapse before even the medical profession comes to realize the enormity of this crime against humanity; but we can not doubt that in due time popular opinion will crystallize into law that will arrest the evil.

The Paris Court of Appeals has decided that the fact of marrying while suffering from any venereal disease is sufficient cause alone on which to grant divorce. A bill is now before the German Reichstag providing heavy penalties for the transmission of any venereal disease in any form or manner whatsoever. The State of Texas prohibits the marriage of the epileptic, and bills have been introduced before the legislatures of Massachusetts, Ohio and Maryland prohibiting the granting of license to marry to the syphilitic, epileptic, feeble minded, dipsomaniac, and consumptive.

It is not expected that they will pass these legislative bodies; the cup of sacrificial blood is not yet full; youth, beauty and innocence, must still be legitimate prey for disease and lust, but the agitation will not cease till this enormous iniquity is finally blotted out forever.

THE DISAGREEMENT BETWEEN DOCTOR AND DRUGGIST.

The druggist drove the opening wedge when he stocked "patents," and the doctor widened the breach when he began to carry more tablets than the small pocket case required. And the contest grew as each strengthened himself in his position.

The pharmacist was undoubtedly in the wrong when he "stocked patent medicines because there was a demand for them." An educated man, with some knowledge of the action and possibilities of drugs, he could not but know that the "demand" was a spurious one, incited by falsehood and maintained by constant deceptive advertising He knew that a solution of epsom salts in water, colored with caramel, and combined with fractional doses of potassium iodide could not be depended on to cure every case of syphilis, no matter by what name it was called, or how many testimonials accompanied the labels; yet because he could buy it at 60 cents per bottle, and sell it at $1.00, he was willing to stifle his professional conscience and retain the 40 cents as his share of the unscrupulous manufacturers ill gotten gain.

The physician, not especially elated by the attitude of the pharmacist, gradually increased his stock of tablets, and often added a line of such liquids as he was accustomed to prescribe.

The pharmacist gradually became more bold in his transgressions of professional decency, wrapping the bottles which the doctor had prescribed for bronchitis with advertisements of "cough and consumption cures." And so the breach widened gradually, until now the two professions have little in common, and the pharmacist has become a patent medicine fakir, and the doctor a pill roller. Accusations and recriminations have followed from each of the opposing elements, with the doctor seeming to have the best of it; for it is certain that the doctor can do without the druggist much easier than the druggist can do without the doctor. So intense has the feeling become that in a number of the large cities, "Prescription Parmacies" have been established (the designation is necessary to separate them from patent medicine shops).

These establishments assure the doctor that they will carry no "patents" whatever; that only first-quality drugs shall be used; that no prescription will be "repeated" unless on the written order of the physician. In short, they find it necessary to assure the physician that they are going to run a *legitimate pharmacy*.

Wherever established they have proven immediate and pronounced successes from every standpoint, thus proving that the fault is not with the doctors, who show by their prescription writing that they greatly prefer having a pharmacist compound their medicines, rather than do it themselves. And herein is the solution of the trouble as far as the continued existence of the pharmacist is concerned; he must return to the legitimate practice of his profession before he can expect or deserve the patronage, friendship, or support of the physician.

TONSILITIS.

This disease, probably identical with the "ulcerated sore-throat," known to older practitioners, has become endemic in many localities, and the season is now here when every doctor will have a number of cases. Most text-books, and the majority of clinicians, view it as a manifestation of the lithæmic diathesis, and treat it accordingly. Others hopelessly confuse its symptomatology with that of quinsy, i. e., phlegmonous tonsilitis—a totally different disease.

Tonsilitis, or follicular tonsilitis, is an acute, contagious disease; manifested locally by whitish spots or membrane on one or both tonsils, with or without any sensation of soreness or difficulty of deglutition. Its systemic disturbances include malaise, chil-

liness, or decided rigors, anorexia, intense headache, or even delirium, aching of the back, limbs and joints, and a feeling of extreme weakness.

Children are most susceptible, but no age is exempt. Instead of one attack conferring immunity, it but predisposes to subsequent attacks. Because it is popularly considered "only a sore-throat," many not only neglect medical treatment, but also are careless regarding hygienic precautions. Such persons are repeatedly infected—each attack leaving the glands in a worse condition—until chronic hypertrophy results from the continued inflammations; and all the while they are perambulating foci of infection to their immediate neighborhood.

In its most virulent form it closely simulates diphtheria, the plainest distinguishing feature being that the membrane never involves the uvula as in diphtheria.

It is evidently a local disease, with a general effect, and the symptoms indicate that it is caused by a specific organism which, with the tonsil as a nidus, has power to produce toxines able to cause the severe rigors, fever, headache, etc., so often experienced during an attack.

If this hypothesis be correct, a more rational treatment than that based on the rheumatic diathesis would be one along antiseptic lines.

This treatment has been a success in some of the northern States, in that the symptoms are at once relieved *in all cases*, while with the older method but few cases experience any marked relief from the routine treatment.

The temperature is lowered, if high, by small doses of acetanelid, which, at the same time, relieves the headache and muscular soreness. The tonsils are well swabbed with pure peroxide of hydrogen, and this is followed by tincture of iron and glycerine, of each two drachms; chlorate of potassium, one drachm, and distilled water enough to make one ounce.

These applications are made every two hours, and in most cases the disease has disappeared in 24 hours.

UREMIA.

The blood contains normally 0.016 to 0.020 per cent. of urea. In nephritis, Asiatic cholera, cholera infantum, eclampsia, etc., owing to albuminous decomposition, urea is formed in the blood in abnormally large quantities.

The liver is the chief organ concerned in the production of urea. The urea is eliminated chiefly by the convoluted tabules of the kidneys. The kidneys excrete every 24 hours normally 41 gms of organic matter, 33 gms of which is urea. The remaining 8 grms consist of uric acid, hippuric acid, creatin, creatinin, xanthin bases, coloring matters, and extractives. According to our present knowledge, uremia is due to a retention in the blood of all the organic constituents of the urine. The term *urinemin* is hence a better word than *uremia* to express the pathological state.

The organic compounds of the urine are all nitrogenous bodies. A quantitative analysis of the nitrogen excreted by the kidneys, after albumen is separated, should furnish sufficiently accurate data from which to determine the degree of urinemia in a given case. The hypobromite test with Doremus' ureometer is adequate for the purpose. By daily measurement of the 24 hour urine, and the record shown by the ureometer, the progress of any case can be known day by day, and the proper treatment be thereby indicated. If the daily excretion of nitrogen grows steadily less, we know the degree of toxemia is likewise increasing; hence elimination is demanded by sweating, purgation, or bleeding, according to the urgency of the symptoms.

With regard to venesection in these cases, Dr. Hare, of Philadelphia, has recently advocated the transfusion of a 1 per cent. common salt solution into a vein of one arm, whilst blood is drawn from the opposite arm or leg, particularly if the arterial tension is high, and the patient is otherwise in a condition permitting loss of the impure blood.

RELATIONS BETWEEN PHYSICIAN AND LAITY.

The relations between physician and laity should be of the most friendly and confidential character at all times.

That the physician does share in their secrets and confidences as their medical adviser, we all know, and this is true in nearly every instance where a physician is employed.

But after all, the allurements of the patent medicine vender, or more correctly speaking, the proprietary medicine vender, have their effect.

When Dr. Quackem's newly discovered vegetable cure-all is sought after by the neighborhood, the physician may be ever so skilled in his profession, and ever so well versed in science, even theology, his best efforts to restrain and educate the laity to a proper mode of living, his efforts will be met with scorn.

They will even hint at his possible interestedness as though the physician's interest

was entirely mercenary; as though he could for a trifle barter away his manhood.

Why was it ever thus? The laity have sought after the miraculous and have ever been deceived!

We are certainly living in the greatest era of medical progress the sun has ever shown upon, and still our fellowmen are being basely deceived and deluded by itinerant venders of drugs, unscrupulous pretenders to medical knowledge and miraculous cures performed by seers (?) who advertise to diagnose all manner of diseases without ever asking a question, or in some instances without seeing the patient.

This has called for active medical legislation, which has in a measure prevented imposture, although since a greater demand obtains for such treatment, it will be abundantly supplied, and the number of its dupes be multiplied.

One reason for which is, the fact that these imposters know what the popular opinions of the laity are concerning their diseases.

One of the most common is, a yearning in the spring for a blood purifier of some kind, and this idea has been fostered to some extent by both physician and patient.

Whatever tradition has done for humanity it has fastened a few delusions which remain a permanent part of every household.

The sale of tons of sarsaparilla attest to this peculiar trait of the human character every year, and the quacks are not slow to take advantage of these popular fads; all their success in the treatment of worms and catarrh are based on the popular notions of the laity concerning these afflictions.

A more friendly and confidential relation should obtain between the family physician and his patient in relation to self-medication. A few practical hints may be the means of preventing, to a great extent, the sale of nostrums to the laity in the practice of every physician.

SERUM THERAPY.

To one who has followed the developmental researches along the lines of serum therapy, the future seems radiant.

It is not so much what has been actually accomplished, as the faint tinges of hope inspiring light that occasionally shoot athwart the gloomy darkness of our ignorance and seem to bid us hope anew.

The way was long between vaccination and diphtheritic antitoxin, but our methods are crude, and our instruments clumsy. "The microscope is a coarse, blundering tool," and our centrifuge tubes but rough sluice-ways. What do we know of life, disease, or death? What of the mountains and valleys, streams and basins of the blood corpuscles? We give battle to death, yet know not what life is.

Yet small-pox has lost its terrors, and diphtheria falls back vanquished. Already typhoid has been assailed along these lines, and hydrophobia has yielded. Soon tuberculosis will follow, and be no longer the reproach of medicine.

Organo-therapy bespeaks attention, and records isolated victories. These achievements cause the weary doctor to "hope on, hope ever," for the quickened coming of the dawn of that new era when disease shall be the slave and we the masters, when the scourge shall be stayed, and the pestilence driven backward, and fair Hygeia with outstretched arm shall point the sufferer to the temple of Esculapius with promise of certain cure.

THERAPEUTICS.

The subject of therapeutics is so closely interwoven with that of general medicine—in fact, is a part of it—that it would seem that the keenest interest would always be manifested in this branch of our work, and yet is not this subject about as much ignored as any part of our study? The whole interest seems to center in one chief thing—whether the patient, for whom we are prescribing, paying little or no attention to the exact action of the drug administered gets well? So long as materia medica and therapeutics are confined to this with the practitioner, just so long will they be a dead letter and be of no interest.

Each department of our profession is dependent upon the other, and yet is this not particularly so of all, toward therapeutics. It is safe to say that it is the one subject that students, as a whole, try to shirk, not because they do not see the need of it, but at a glance they see the whole category of drug names and the different preparations of each, with their doses, and at once turn away in disgust, and only return to a day's duties for the protection of themselves at quiz. Is it not a fact that many go through colleges that have not spent ten consecutive minutes in the thought of drugs in groups? As for instance, the cathartics: In what condition are certain cathartics called for, have we made groups of this class, and are we familiar with the action of those individual drugs constituting this group?

I think we will become more interested in it as a study if we look upon it as a matter of interest rather than of duty.

Why do we at one time use sodium phosphate as a cologogue and again at another

the mild salt of mercury? In writing a ℞. why should we select iridin or enonymin in place of some other hepatic stimulant?

Do we desire to use an emetic, why then do we choose ipecac or squills rather than apomorphia or the yellow subsulphate of mercury?

Why do we prefer hyoscyamus rather than belladonna as an antispasmodic, or chloral to the bromides? Why use ammon. carb. in a cough mixture at one time and the chloride at another? Why? Why??

Herein lies the interest of therapeutics. Empiricism is a mark of ignorance, while rational prescription writing becomes an art bordering on to a science. He who writes his prescription and has each article in it for a specific purpose, one harmonizing with the other, will eventually become a scientific man, whose merit will be known to the profession; but he who scrambles for a pen and writes down *something* for a cough without having first enquired into the specific character of it, will deserve the disdain which such carelessness and ignorance merits.

"Yea, he shall also reap his reward!"

"CLIMATE."

This is the name of a new journal that has recently made its appearance in St. Louis. It is edited by Dr. S. C. Martin, Jr., and published by the Climate Publishing Co. A copy of the first edition is before us, and it is indeed a grand exhibition of a high type of medical journalism. Dr. Martin inherits talent for this kind of work. His father is one of the most successful journal men of the country, having published and edited the Medical Era for many years. This new journal contains some sixty pages of interesting reading matter pertaining to climate, and a list of advertisements that would do credit to a journal ten years old.

Dr. Martin is one of the most brilliant young physicians of the Western States. He has been a success, and this new enterprise that he has interested himself in will have a tendency to stimulate investigation and study of these special subjects that are really an invaluable aid in the cure and management of many diseases. We welcome the new journal and wish it the success and patronage it deserves.

THE MEDICAL SOCIETY OF THE CAROLINAS AND VIRGINIA.

The Tri-State Medical Society of North Carolina, South Carolina and Virginia was organized at Virginia Beach, August 31st, 1898, with temporary officers as follows: Dr. W. H. H. Cobb, of Goldsboro, N. C., President; Dr. H. H. Dodson, of Milton, N. C., Treasurer, and Dr. Paulus A. Irving, of Richmond, Va., Secretary; and a representative committee of organization from the three States.

A circular setting forth the object of the association was issued in October, stating that the first meeting would most likely be held in some central city of North Carolina about November 22d, 1898. As the time approached it was deemed advisable to postpone this meeting to a later day on account of the political troubles in the Carolinas, and the proximity to Thanksgiving Day. Charlotte, N. C., January 18th, 11 A. M., 1899, have been definitely decided upon as the place and time of the meeting for permanent organization. Dr. E. C. Register, of Charlotte, has been appointed Chairman of the Committee of Arrangements, and has promised all who may attend a most cordial welcome. The Central Hotel, near the hall of meeting, will be the headquarters of the association, and it has given a rate of two dollars ($2.00) per diem. The Southern Railroad and the Seaboard Air Line, which traverse both North and South Carolina and Virginia, have promised reduced rates, which will be definitely stated in the announcement circular which will be issued in a short while.

Considering the short time and the little effort that has been put forth, a most flattering membership has been enrolled; *fifty-four* from Virginia, *forty-two* from North Carolina, and *seventeen* from South Carolina; a total membership of *one hundred and thirteen*. Nothing in this organization can be construed as interfering with or substituting either of the three State Medical Organizations, for a prerequisite for membership in the *Tri-State Society* will be that the *applicant must be a member in good standing of his respective State Medical Society*.

A number of papers have been promised by prominent members of the profession from the three States, and an interesting programme will be presented. Application for membership may be sent to any of the officers of the temporary organization, or forwarded to the association in session at Charlotte, N. C., January 18th to 20th, 1899.

PAULUS A. IRVING, M. D.,
Secretary, Richmond, Va.

Dr. Oliver Wendell Holmes used to say of the study of pathological anatomy, that it is a good deal like the study of the fireworks after the Fourth of July.

BOOK REVIEWS.

A Text-Book of Pathology. By Alfred Stengel, M. D., Instructor of Clinical Medicine in the University of Pennsylvania. With 372 Illustrations. Price, cloth, $4.00 net. Half morocco, $5.00 net. Philadelphia: W. B. Saunders, 925 Walnut Street. 1898.

The writer has presented the subject of Pathology in a most practical manner as possible and from the point of view of the clinical pathologist.

The work is divided into two great divisions, General Pathology and Special Pathology.

General Pathology is divided into the following eight chapters: Chapter I. The Etiology of Disease; chapter II. Disorders of Nutrition and Metabolism; chapter III. Disturbances of the Circulation of the Blood; chapter IV. Retrogressive Processes; chapter V. Inflammation and Regeneration; chapter VI. Progressive Tissue-Change; chapter VII. Bacteria and Diseases Due to Bacteria; chapter VIII. Animal Parasites and Diseases Caused by Them.

Special Pathology is divided into fourteen chapters, the first being devoted to Diseases of the Blood. The diseases of the different systems are then discussed in their proper order.

Controversial matters have in this work been largely avoided, and its subject matter is presented in an eminently practical manner. The field of pathology is well covered. It is a most excellent book, being thorough and up to date, and as a book for study or reference it will be of value to both student and practitioner. A feature of this work is the number of excellent illustrations so essential to a book of this character, which are scattered throughout its pages.

Histology, Normal and Morbid. By Edward K. Dunham, M. D., Professor of General Pathology, Bacteriology, and Hygiene, in the University and Bellevue Hospital Medical College, New York. In one very handsome octavo volume of 448 pages, with 363 illustrations. Cloth, $3.25, net. Lea Brothers & Co., Publishers, Philadelphia and New York.

This is the only volume, to our knowledge, in which the subject of normal and morbid histology is taught in close contrast. Its special advantage is readily seen in this excellent work. This volume is divided into three parts: Normal Histology; Histology of the Morbid Processes, and Histological Technique. The first ten pages is devoted to a nice and complete introductory. Following this is taken up Normal Histology, the first chapter being devoted to the history and life of a cell. A short chapter follows on Elementary Tissue, then the Epithelial and Connective Tissues are treated. Then follows the detail discussion upon the circulatory system, the digestive organs, the urinary organs, &c. The admirable clearness of his text is paralleled by the art he has evinced in selecting his material and presenting it with due regard for each subject, and with the neglect of none. An advantageous degree of conciseness has been aided by the profuse series of engravings, well chosen, carefully executed, and telling their subject effectively. The work is notable, not only for comprehensiveness, but also for clearness, and the success it merits will undoubtedly fall to its lot.

Practical Uranalysis and Urinary Diagnosis. A Manual for the Use of Physicians, Surgeons, and Students. By Charles W. Purdy, M. D., LL. D., (Queen's University): Fellow of the Royal College of Physicians and Surgeons, Kingston; Professor of Clinical Medicine at the Chicago Post Graduate Medical School. Author of "Bright's Disease and Allied Affections of the Kidneys; also of "Diabetes: Its Causes, Symptoms and Treatment. Fourth, Revised Edition. With Numerous Illustrations, including Photo-engravings and Colored Plates. In one Crown Octavo Volume, 365 pages, bound in Extra Cloth, $2.50 net. The F. A. Davis Co., Publishers, 1914-16 Cherry St., Philadelphia: 117 West Forty-second St., New York City; 9 Lakeside Building, 218-220 S. Clark St., Chicago, Ill.

Judging from the fact that three large editions of this work have been exhausted within three years and that the work has been adopted as a text book upon the subjects is in itself a sufficient indication of the worth of the book. The writer is a thoroughly practical man, familiar, from constant use, with the apparatus and methods which he describes, a number of these being of his own invention or elaboration. In this, the fourth edition will be noticed several improvements. Some extended changes will be observed in the chemistry of the urine. Special attention has been given to the quantitative estimation of sugar, and a table has been added from which the amount of sugar, in grams, per fluid ounce, or the percentage, can be read off. The detection of albumin has received special attention. The author's improved electrical centrifuge and the method of its use are fully described.

The work is very replete with fine illustrations and is improved materially both in quality and design. We can highly recommend the work, either as a laboratory manual or as a reference work.

International Clinics. A Quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynecology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology and Dermatology, and Specially Prepared Articles on Treatment and Drugs. By Professors and Lecturers in the Leading Medical Colleges of the United States, Germany, Austria, France, Great Britain and Canada. Edited by Judson Daland, M. D., (University of Penna.), Philadelphia: J. Mitchell Bruce, M. D., F. R. C. P., London, England; and David W. Finlay, M. D.. F. R. C. P., Aberdeen, Scotland. Volume III., Eighth Series, 1898. 8vo. pp. 355. [Philadelphia: J. B. Lippincott Co. 1898.

These clinics come to our table promptly and in the same usual interesting and entertaining manner. In this volume many lectures by Europeans are given, not mentioning those contributed by well known Americans. This volume still maintains the high standard of excellence which has been adopted for this publication. We specially commend the articles on Therapeutic Methods. The Comparative Results of the Four New Operations for Hypertrophy of the prostate gland are clearly set forth by Dr. Edward Andrews. To show that this work is highly appreciated the sales are very large in this country and in England. We highly commend the Clinics to the general practitioner.

Egbert's Hygiene and Sanitation.—A Manual of Hygiene and Sanitation. By Seneca Egbert, A. M., M. D., Professor of Hygiene in the Medico-Chirurgical College of Philadelphia. In one handsome 12mo. volume of 360 pages with 63 engravings. Cloth $2.25 net. Lea Brothers & Co., Publishers, Philadelphia and New York.

The importance of the branch of medical science which teaches the prevention of disease rather than its cure, and which deals with aggregates of people as well as with individuals, cannot be overestimated. Full acquaintance with the rich literature of Hygiene and Sanitation has shown the need of an authoritative book, presenting the most modern knowledge of these rapidly advancing subjects, and written in a style answering the needs of students and practitioners of medicine and professional sanitarians as well as lay readers and students interested in personal or publis questions regarding the conservation of health. This demand is supplied in Professor Egbert's volume at hand, and it summarizes the world's knowledge of its subjects, and, avoiding undue technicalities, places the necessary information concretely at command.

Enlightened public sentiment has led to the inclusion of Hygiene and Sanitation in the curricula of great numbers of academic institutions and in an overwhelming majority of medical colleges, and examinations in these subjects are now required by the Boards which guard entrance to the practice of medicine in most of our States. Professor Egbert has framed his work in recognition of the needs of all these classes of undergraduate and postgraduate students, and its adoption as a standard text-book is assured. The work is well illustrated, convenient in size and most moderate in price.

A Pocket Medical Dictionary. By Geo. M. Gould, A. M., M. D. A new edition, rewritten and enlarged, including over 21,000 words. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1898.

Gould's Dictionary has always been popular before the public. The present volume has been wholly made over, and the number of words defined is nearly double that of the other volume.

Several features of this book call for special mention:

I. The simple and practical system of pronunciation.

II. The large percentage (about 75 per cent.) of words specially pronounced.

III. The concise definitions.

IV. The omission of rare and obsolete words out of place and useless in a book of this character. It would have been easy to add 5,000 such words.

V. The many valuable tables, especially that of clinical eponymic terms, a novelty that in itself is worth the one dollar asked for the book.

VI. The style in which the book is made, the types, shape, printing and binding.

VII. The size of the book. By the use of specially made thin paper, narrow margins, the exclusion of rare and obsolete words, etc., the bulk has been so reduced as to be properly called a *pocket* dictionary—"infinite riches in little room."

The addition of the useful tables of muscles, nerves, arteries, the various microorganisms, comparison of thermometric scales, and, above all, a dose table compiled directly from the latest and best works on materia medica must all prove very useful.

The Physician's Visiting List (Lindsay & Blakiston's) for 1899. P. Blakiston's Son & Co., Philadelphia, Pa.

This is the forty-eighth year of the publication of this visiting list which attests its popularity better than words from us. The "regular edition" is made in one volume for twenty-five and fifty patients a week at

$1.00 and $1.25, respectively; also in two volumes a year, from January to June, and from July to December, for fifty, seventy-five, and 100 patients a week—prices, $2 and $2.25. The "perpetual edition" is the same as the regular edition, but without dates; for 1,300 names, $1.25; for 2,600, $1.50. In the "monthly edition" the patient's name need be written but once during the month, $1. All editions have tucks, pocket and pencil. The "dose table" is compiled by Dr. George M. Gould. Other valuable tables are introduced.

Pathology and Morbid Anatomy. By T. Henry Green, M. D., Lecturer on Pathology and Morbid Anatomy at Charing-Cross Hospital Medical School, London. New (8th) American from the eighth and revised English edition. In one very handsome royal octavo volume of 600 pages, with 215 engravings, many being new, and a colored plate. Cloth, $2.50 net. Lea Brothers & Co., Publishers, Philadelphia and New York.

This is the eighth edition of this work in England and the eighth in America, sufficient proof of its high excellence as a standard work on Pathology. There can be no question that Green's work has been the leading text-book in its department. One of the leading disadvantages of most text-books on Pathology is that they are either too voluminous, or else too abbreviated to meet the requirements of the student. Not so with the work before us, it cannot be considered lacking in detail, comprising 600 pages, the subject of Pathology is presented in a manner to be at once grasped by the student, and very clearly comprehended by the practitioner. This new edition preserves the characteristics which have won popularity, but shows a revision and rearrangement on every page in conformity with the advances of the subject. This work has always been noted for its numerous, clear and beautiful illustrations, and in this edition many new ones abound. The work is handsomely printed and neatly bound. We heartily commend the work to our readers.

Cataphoresis or Electric Medicamental Diffusion as Applied in Medicine, Surgery and Dentistry. By William James Morton, M.D., Author of "The X-Ray, or Photography of the Invisible." One volume, large 8vo, Illustrated. Half Morocco Leather, Gilt Top, $5.00. American Technical Book Company publishers, 45 Vesey Street, New York.

Doctor Morton is the recognized authority on this subject. Prior to the publication of this valuable volume the profession have had only the occasional papers appearing in the scientific press for reference. The volume now before us covers the whole subject and can be taken as a reliable guide book by the dentist and surgeon.

This is the only work published on the subject and is indispensable to all members of the medical profession. The work is profusely illustrated with fine engravings and diagrams showing the application of cataphoretic instruments.

The contents are:

Introduction.

Part I.—Historical. Early Experimenters, Modern Revival. Development in Dental Surgery. The Writer's Contributions.

Part II.—Physics and Physiology. Elementary Electrical Principles. Sources of Electricity. Simple or Chemical Osmosis. Electrical Osmosis or Cataphoresis. Electrolysis and Cataphoresis. Physiological Experiments.

Part III.—Apparatus and Outfit. Electrodes for Medicinal Diffusion. Electrodes for Metallic Electrolysis. Dental Electrodes. Batteries. Rheostats. Medicaments. Central Station Circuits.

Part IV.—Applications in Dental Surgery. Anæsthetization of Sensitive Dentine. Anæsthesia of the Gums. Antisepsis or Sterilization of the Teeth. Diffusion from Soluble Electrodes.

Part V.—Applications in Medicine and General Surgery. Simple Cataphoresis. Cataphoric Medication or Electric Medicamental Diffusion. Electro-Cocaine Local Anæsthesia. Electric Diffusion from Soluble Electrodes.

The Medical News Visiting List for 1899. Weekly (dated, for thirty patients); Monthly, undated, for 120 patients per month); Perpetual (undated, for thirty patients weekly per year), and Perpetual (undated, for sixty patients weekly per year). The first three styles contain 32 pages of data and 160 pages of blanks. The 60-patient Perpetual consists of 256 pages of blanks. Each style in one wallet-shaped book, with pocket, pencil and rubber. Seal Grain Leather, $1.25. Thumb-letter Index, 25 cents extra. Philadelphia and New York: Lea Brothers & Co.

A visiting list is an indispensable convenience for the active practitioner. Its carefully adapted blanks enable him at once to note clinical details of every day work, as well as charges and receipts, and to unburden his memory from what can better be carried on paper. It also furnishes him with a legal record necessary for the collection of delinquent bills. Prominent among the many books of this nature stands

the Medical News Visiting List. Its blank pages are arranged to classify and record memoranda and engagements of every description occurring in the practice of the physician, surgeon or obstetrician. The work opens with 32 pages of printed data of the most useful sort, including an alphabetical Table of Diseases, with Approved Remedies, a table of Doses, sections on Examination of Urine, Artificial Respiration, Incompatibles, Poisons and Antidotes. a Diagnostic Table of Eruptive Fevers, and a full-page plate showing at a glance the incisions for ligation of the various arteries, an invaluable guide in such emergencies.

Diet for the Sick. By Miss E. Hibbard and Miss Emma Drant, matrons at two large hospitals in Detroit. 103 pages; board sides, postpaid, 25 cents. The Illustrated Medical Journal Co., Detroit, Mich., publishers.

This is the third edition of this handy and popular little bedside book. The recipes for sick dishes have all been tried, and are those largely used by the Detroit hospitals where the two contributors of them served as matrons. Added to these are various Diet Tables, as for: Anæmia, Bright's Disease, Calculus, Cancer, Consumption, Diabetes, Dyspepsia, Fevers, Gout, Obesity, Rheumatism, Uterine Fibroids, etc., as given by the highest authorities. The booklet is intended to be given to the family by the physician, and for such purposes, one-half dozen will be sent, prepaid, on receipt of $1.00.

Transactions of the Iowa State Medical Society, Vol. XVI. Forty-seventh Annual Session, 1898, Burlington, Iowa.

Dr. Jas. W, Cokenower, of Des Moines, is Secretary, and Dr. E. Hornibrook is President, These transactions give the minutes of the meeting, the report of committees, the valuable papers read at the meeting, with a full and clear discussion. These transactions are noted for their neat production and the high standard material found therein.

The Ohio State Medical Society. Transactions of the Forty-third Annual Meeting, held at Columbus, Ohio, May, 1898.

These transactions are admirably arranged and are full of interesting and valuable material. They are neatly bound and well printed.

LITERARY NOTES.

Lippincott's Magazine for December, 1898.—The complete novel in the December issue of Lippincott's isby Annie Eliza Brand, and has its action mainly in London. "Mrs. Russell's Sister" is a young, well-to-do, and attractive widow, who takes a small house in a back street with a view to benefiting her humbler neighbors; but her philanthropic efforts are apt to require masculine assistance, and all her fortitude cannot keep her lovers at a distance.

"Lincoln of Coyote," by James T. McKay, is a plain Western tale of a weak and alcoholic husband, a wife whose patience is worn out, a dubious friend, and a faithful one who does what he can to mitigate the tragedy and acts as a sort of presiding genius.

"Nobody's Fool," as described by L. S. Bernard, was an unpretentious person who knew how to turn the tables on a worthless wife.

Charlotte Adams, in "Six Weeks on the Stage," gives an account of a brief and unprofitable theatrical experience.

Kate Mason Rowland Sketches "Philadelphia a Century Ago," chiefly through letters of Mrs. Stoddert, wife of our first Secretary of the Navy, when the city of Penn was the national capital.

"Babylon the Great" is reconstructed from its ruins by Austin Bierbower, who makes that mighty city of the remote past live again before us.

Some account of "Verona" is by the late Bishop William Stevens Perry of Iowa.

"Table Sundries" (nuts, eggs, berries, etc.) are described by Calvin Dill Wilson.

"Rudolf's Decision,"in Anthony Hope's last romance, is discussed by Frederic M. Bird, who aims to show that the case was clear, not open, as some have supposed.

Alfred Balch takes grounds for "Signature in Newspapers.—i. e., that reporters and others should bear the responsibility and get the credit for what they write.

The poetry of this number is by Mary E. Stickney, Carrie Blake Morgan, Grace F. Pennypacker, and Francis Sterne Palmer.

An important feature of the editorial department, "The Progress of the World," in the American Monthly Review of Reviews for November is the survey of the State and national political campaigns of the present year. All the leading issues are presented from a non-partisan point of view.

In the American Monthly Review of Reviews for December the editor reviews the November elections, the progress of our peace negotiations with Spain, and other matters of national and international mom-

ent. Some very suggestive and interesting cartoons from recent issues of the Spanish journals are reproduced.

THE DECEMBER FORUM.—The December number of The Forum is a strong one, as regards both writers and subjects. The following is the table of contents:

"The Doctrine of Intervention," Hon. Charles Denby; "Annexation and Universal Suffrage," Prof. J. B. McMaster; "Lessons of the Recent Election," Representative J. W. Babcock; "Forest Fires," Henry Gannett; "Political Activity in the Secret Service," Hon. Perry S. Heath; "The Relation of Japan to Other Nations," D. W. Stevens; "The Educated Negro and Menial Pursuits," Prof. W. S. Scarborough; "Journalism: its Rewards and its Opportunities," Truman A. De Weese; "Recent Construction of the Federal Anti-Trust Act," David Wilcox; "Germany and Great Britain—II.," His Excellency A. von Schäffle; "The Protest of the Pillager Indians," Francis E. Leupp; "Sociological and Ethnical Sources of the Greatness of Venice," Prof. Cesare Lombroso; "Cyrano de Bergerac," Gustav Kobbé.

MISCELLANEOUS.

Hired Expert Medical Testimony Again.

The Editor of The Charlotte Medical Journal:—Dr. M. H. Fletcher's article upon the above subject, and the discussion as published in the Journal for November, very vividly brought to my mind a trial lately held in this city in which the writer and a half dozen other physicians took part as medical expert witnesses. Four of these physicians, before the trial, acting for one of the parties to the trial, began an examination of a man. Three of the four reached the same conclusion, but the physician disagreeing, withdrew from the consultation, and did not go upon the witness stand.

Two other physicians were then asked to examine the man. These physicians did not know what the medical testimony had been neither did they know which party had asked to have the examination made. They arrived at an entirely different conclusion from that of the three physicians, but agreed with the opinion which was forming in the mind of the fourth physician when he withdrew from the examination. A re-examination was then made by the three physicians who had first testified, which examination only strengthened their opinion as given upon the stand.

The man was then, at the suggestion of these three physicians, taken to another physician for examination and the testimony of this physician coincided with that of the three. As soon as this testimony was given the two physicians went to this last physician and presented the case to him as it had seemed to them. The court granted the physician the privilege of making another examination. His testimony after making the second examination, if at all different from his previous testimony, was modified in the direction of the two physicians.

Here were seven physicians who are well acquainted with each other, are personal friends, and the most of whom had no personal interest whatever in the case, who disagreed, not upon a question of opinion alone, but upon questions of facts. They disagreed upon the measurements of limbs. They disagreed as to whether the man had flat feet or not. They disagreed as to whether his mouth was sore or not sore; they disagreed as to whether he had a scar upon the penis or not; as to whether glands were enlarged; as to whether an eruption was of a copper color; as to whether there was paresis in one leg; and they disagreed as to whether the broken down glands about the neck were tubercular or syphilitic. Now the most of these disagreements are inexcusable and the writer feels that he is at least one-seventh to blame for the burlesque upon the profession which such an exhibition brought about.

Attorneys are a good deal more dishonest and untruthful than I believe them to be, or else they make equally as serious mistakes as physicians do, as they in every trial, in the above trial, differed radically upon legal facts, so that we are unnecessarily sensitive when we take seriously to heart the unfavorable opinions which courts and attorneys may express regarding medical testimony.

In this case the ridiculous position in which we physicians find ourselves, would have been impossible had the seven physicians examined the man together. Men may and will always differ in opinions, but if physicians when together will write down facts as they find them, and then sign that statement of facts, there will be no disagreement upon the score of facts.

Please excuse the expression, but we plead the baby act a little when we profess to feel badly over the trickery of attorneys. When a physician who has carefully studied his case, and then has formed an opinion, is on the witness stand, no attorney can trouble him very much if he carefully holds to his opinion.

The courts, here at least, deal fairly with physicians, and our attorneys are gentlemen as well. One often hears a question like this in cases for damages for personal injuries, "What would you take to have your wife or child in a condition like this?" A man would be lower than a brute, if he were to allow a little finger cut from his child's hand, but after the finger has been accidentally cut from the hand, and the man goes into court to establish a money value for that finger, he has left the sentimental domain of sympathy, and has launched out upon the stormy sea of commercialism. Physicians cannot help being drawn into these whirlwinds, and physicians then must lay aside their sympathetic self, and deal with things as they find them.

J. L. Tracy, M. D.

Toledo, Ohio, Nov. 30, 1898.

A Study of Twelve Cases of Malarial Hematuria, with Four Autopsies.

Report on pathology of malarial hematuria of the Tri-State Medical Association of Mississippi, Arkansas and Tennessee:

An attack of malarial hematuria is almost always preceded by chronic malaria. The tertian parasite is in most instances the predisposing cause. The estivo-autumnal parasite, which is the one found during the hematuria, is probably a plus infection and the provocative agent giving rise to the hematuric attack. It may be already absent, and generally rapidly disappears from the blood. The red cells are very much reduced; a reduction of 3,000,000 cells may take place in a single day. The hemoglobin may fall to fifteen per cent., and as much as seventy per cent., in a single day; it is always higher than the blood count, though the red cells themselves are deficient; this is due to free hemoglobin in the plasma. The white cells are diminished, though their proportion to red may be greater. In severe and fatal cases a hypoleukocytosis from the beginning, becoming more marked toward the end, has been the rule. Phagocytosis is marked in mild cases. The plasma contains hemoglobin, pigment clumps, leucocytic fragments and debris, and is always increased in toxicity. The absence of fibrin factors is conspicuous from the beginning. Regenerative efforts, marked by the usual signs, are well shown in convalescence.

The urine is second in interest in the blood. In fresh specimens, red cells or their "phantoms" are always seen; these soon break up upon standing. Blood-coloring matter is always in great excess of the cells found; it is mostly methemoglobin, but all the hematogenous pigments may be found; likewise all the albumins may be encountered in the urine. The acidity is frequently equal to one and a half volumes of one-tenth normal potash solution. Casts are always found, but more easily detected after urine clears up. Leucin and tyrosin are fatal signs. The vomit and feces are charged with bile-coloring matter, and little or no bile salts. The liver is only making mucus and pigment. The other matters are returned into the blood, and there cause the secondary blood destruction. The pathologic and post-mortem findings point to the following hypothesis:

The liver and spleen—which normally dispose of the hemoglobin—are already overworked.

The peripheral vessels are periodically contracted by the chill, producing additional pressure upon these.

The excessive waste hemoglobin is worked up into hydrobilirubin, which with mucus and xanthin bodies forms a pseudo-bile which, owing to pressure, is absorbed into the circulation, producing additional hemolysis.

The product of this, being barred exit through spleen and liver, is thrown upon the kidneys, and produces methemoglobinuria, in addition to a true hematuria, which is in proportion to the renal congestion.

The plasmodia rapidly disappear from a blood undergoing this toxic destruction; hence quinin is unnecessary, and even injurious.

The causes of death are anemia, cardiac paralysis, nephritis, "uremia." The treatment should be eliminative and supportive. In presence of active malaria some antiperiodic other than quinin should be used. Rigors are to be anticipated by diffusible stimulants.

A history of twelve cases, including four autopsies with microscopic examination, concludes the report.

Treatment of Ascites by Injections of Oxygen.

The treatment of different forms of peritonitis by exposure to air has formed the subject of considerable investigation. A modification of this method has been studied by Maignot, namely, the injection of sterilized oxygen (British Med. Journal). The writer shows that this method presents considerable advantages over ordinary air, and that it is of use not only in tuberculous forms of peritonitis, but also in the ascites due to cirrhosis of the liver. It has been supposed, for instance, by some that the

effects of air injections are due wholly to the oxygen. It is logical, therefore, to assume that pure oxygen would be more efficacious and much more easily controlled than small injections of air. As the result of a considerable amount of experience the writer thinks that from one to two litres of oxygen should be ample for each injection, and that this amount is much more easily borne by the patient than the larger injections of five or six litres employed by some observers. After such injections the writer finds that the only sequalæ are a very slight elevation of temperature (0.3 to 0.4), or a slight abdominal pain, which disappears in about 24 hours, It is well to apply a binder with a pad placed over the site of injection. The writer seems to have obtained some very remarkable results from oxygen injections.

An Efficient Hemotherapy.

The treatment of anæmic conditions with iron preparations is sometimes rendered difficult by the presence of disturbances of the digestive functions. Anæmic persons are commonly sufferers from dyspepsia and cönstipation, and it is for this reason that it is often so difficult to select a chalybeate remedy which will be well tolerated, and will not increase the exciting gastric and intestinal disorders. In ferrosomatose the physician has an iron preparation which is intended to overcome these obstacles to an efficient hemotherapy. It consists of the albumins of meat converted by a special process into albnmoses and combined intimately with a fixed proportion of iron; in other words, it may be regarded both as a chalybeate tonic and food, for it not only serves to carry to the blood an adequate amount of the requisite iron, but also a large amount of highly assimilable nutriment. Owing to the fact that ferrosomatose is absorbed in its own form and requires no preliminary digestion, it is easy to understand why its administration is so rapidly followed by a gain in flesh and strength. And for the same reason—its immediate absorption without taxing the digestive organs—its use is entirely unattended with the objectionable features of other iron preparations which have been alluded to above.

Coffee as a Medicine.

Jonathan Hutchison, in his "Archives of Surgery," says that he has long been in the habit of prescribing coffee as a medicine in certain states of great debility. He regards it as a remedy quite unique in its usefulness in sustaining the nervous energy in certain cases. Apart from its general utility, and its well known value as an antidote to opium, he has found it of especial service after operations where anæsthetics had been used, and in states of exhaustion where alcohol had been pushed and a condition of semi-coma followed. In these latter cases he has sometimes prescribed it as an enema when the patient could not swallow, and with the best effects. In many cases where death may be close at hand, such an expedient as this may even be the means of permanent restoration to health. Tea and coffee seem to be much alike in many respects, but the latter is greatly preferable as to its sustaining power. It would be a great advantage to our working classes, and a great help towards the futher development of social sobriety, if coffee were to come into greatly increased use, and if the ability to make it well could be acquired. As an example of the difference of effect of tea and coffee upon the nerves, the writer notes what he believes many sportsmen will confirm, that it is far better to drink coffee than tea when shooting. Tea, if strong, or in any quantity, especially if the individual be not in very robust health, will induce a sort of nervousness which is very prejudicial to steady shooting. Under its influence one is apt to shoot too quickly, whereas coffee steadies the hand and gives quiet nerves.

The X Rays in Diseases of the Chest.

Dr. Hugh Walsham (Lancet October 15, 1898,) agrees with the conclusions arrived at by the medical men who read papers on this subject. It is regrettable that reproductions of skiagrams should be so unsatisfactory, but this must at present be the case, as in all the most interesting cases in which this method of examination is employed in medicine, as distinct from surgery, the results as produced on the photographic film do not allow of satisfactory manipulation without an amount of "touching up" which on every ground would be regrettable. There is without doubt a great future in store for this method of examination as soon as it is definitely understood that a pretty picture is not always to be obtained, and more reliance is placed on the screen-examination and report by a medical man accustomed to the frequent use of the screen in diseases of the chest, in the same manner as reports are accepted from those skilled in the use of the laryngoscope, ophthalmoscope, and other instruments requiring special skill in manipulation.

Treatment of Bronchial and Pulmonary Affections by Intra-tracheal Injections†

The treatment of diseases of the respiratory organs by injections into the trachea covers an experience by the writer of over two years, during which trachitis, bronchitis and tuberculosis in different stages have been under observation. The results have been so favorable that the treatment is commended to the general profession; not however as a remedy in tuberculosis, but as a palliative and adjuvant of peculiar value. In nearly every case the treatment afforded marked relief of irritable, disturbing, exhaustive conditions, such as persistent cough, dyspnœa, excessive tenderness of the pharyngeal and laryngeal membrane, etc.

It was found that the solutions employed were tolerated with comfort and that as a rule after a few experiences of the procedure, patients received the treatment with little or no inconvenience. If the throat were found intractable in the start, a spray of a two per cent. solution of cocaine prepared it for the injection, and later the cocaine was dispensed with.

In a good proportion of the particular cases that at the beginning offered little management, there was such evidence of improvement after a few weeks of the treatment that the injections were to be credited for the effect, although other treatment of an approved nature was administered at the same time.

The technique of the operation is comparatively simple. An aspirating syringe, holding from two to four drachms, to which is fitted a bent pipe of a length sufficient to reach below the vocal cords will serve. After a careful laryngoscopical examination the syringe is charged with the proper solution, and with the throat illuminated so that the larynx is in view, the pipe of the syringe is gently introduced between the cords and the medicament discharged into the trachea.

Preference is given so far to the following: Menthol, guaiacol, eucalyptol, ichthyol, oil cinnamon, europhen, which are usually combined with benzoinol or albalene as a very suitable vehicle. From half a drachm to four drachms may be injected at once, according to condition of patient. The old objection of the non-absorptive capacity of the bronchial mucous membrane for extraneous matter has no longer any weight, as the fact of its ready disposal of oily solutions has been demonstrated by experiment as well as by the result of the intra-tracheal treatment.

†Abstract of a paper read before the N. Y. State Medical Society, by Dr. H. S. Drayton, of New York.

Facial Manifestations of Diseases.

Dr. J. D. Morgan states that many diseases are attended with a characteristic aspect of countenance, often recognised by the experienced, so far, at least, as to suggest the disease to his mind. The pallid face, lips, the anxious look. the restless eye, tell, even before the finger is put upon the pulse, of the loss of blood. The pinched nose, the sunken eyes, ashy-coloured countenance, with perhaps beads of sweat upon it, speaks of suffering or pronounced sepsis. The pale face of chlorosis, the puffy, waxy, countenance of Bright's disease, the bloated, heavy look of myxœdema are not less characteristic than the bronzed hue of Addison's disease, the prominence of the eyeballs of Grave's disease, or the yellow tint of jaundice. In vaso-pharyngeal adenoids there are a seeming prominence and puffiness of the cheeks and nasal bones, which cause the eyes to look heavy and sunken. The author states that Dr. Guiteras judges from his first look at the face of a suspect of yellow fever whether he has to deal with a genuine case. Paleness may signify anæmia, syncope, leucocythemia, dropsy, nausea, &c. The size of the face is often very considerably altered in disease. As a result of gout, we have the ruddy appearance of blooming health, which, when associated with high tension in the arteries, is highly suggestive of chronic nephritis. Inspection is even more inportant in the case of children. Pain in the head is indicated by contraction of the brows; in the chest, by sharpness of the nostrils; in the belly, by a drawing of the upper lip. In abdominal colic, screaming is intermittent.

Early Diagnosis of Scarlatina.

The diagnosis of eruptive fevers at the onset is often so delicate, especially in light forms, that it is useful to report the slightest symptoms. Valli-Attiles especially notes the occurrence in scarlet fever of vomiting entirely different from that observed in other eruptive fevers. The vomiting occurs very early, before any other morbid manifestation, and in the absence of any previous gastric troubles; it surprises the child in the midst of play and before the appearance of headache, malaise, fever, or initial angina. In a number of cases of scarlet fever without exanthema, the diagnosis was decided solely by the vomiting and the angina following it. The proof that this symptom belongs to the scarlet fever and not to an ordinary agina is that several cases of agina where it existed were complicated with nephritis, and that children subject to recurrent angina never vomited until the day they had scarlet fever and its characteristic angina.

Malignant Disease of the Breast and its Surgical Treatment.

Recent statistics have unmistakably shown that the treatment of cancer of the breast is followed by much better results than used to be the case say half a century ago. In part this satisfactory condition of things is due to the practice of antisepticism, and in part to improved methods of operating. The Medical Press, in one of its recent editorials, comments as follows on this subject:

The success of an operation for cancer of the breast is measured by the period at which local recurrence shows itself afterwards, and no doubt the only means we have of judging as to the thoroughness of the procedures practiced is by noting the interval which elapses between the operation and the return of the disease. Dr. Rudolph Matas, in a practical paper read at the American Surgical Association in April last, gives a careful *resume* of the points bearing upon this question, and he also insists that the real hope for improvement upon the present figures does not rest so much upon an extension of operative procedures and more perfect technique, but an early recognition and earlier extirpation of the primary focus of invasion. The advance in the method of treatment of these cases dates from the time when it came to be recognized that the area of infection surrounding a cancerous growth was much more extensive than had hitherto been supposed, and that the older surgeons failed in the treatment of these cases, simply because they omitted to remove infected tissue. Hence has come about the establishment of the surgical maxim, as referred to by Dr. Matas, "that few operations for well-developed cancer can be considered radical unless the removal of the primary growth is accompanied by prophylactic extirpation of the tributary lymphatic areas." Surgeons, therefore, are acting on this principle, and the teaching of Halsted, Meyer, Cheyne, Rotter, and others is now being generally followed. Nevertheless, Dr. Matas points out that the terms "complete" and "radical," as applied to thorough extirpation operations for cancer, are anatomical misnomers, inasmuch as it can never be certain that all the diseased area has been dealt with. To clear out the whole of the lymphatic connections of the axilla may, in a given case, have been accomplished with perfect success, but even this by no means disposes of the possibility of other lymphatic infection in some less usual channel. However, it is eminently satisfactory to know that since this principle of surgical practice, as applied to carcinoma of the breast, has been followed, there has been a great improvement in the results. To be able to make such a claim as this at all is a matter for congratulation; moreover, the evidence upon the point is so definite and indisputable that there is really no excuse for operators refusing to adopt the treatment. We mention this point because we believe that some surgeons have failed to recognize, even yet, the importance of an extensive operation for cancer of the breast. It may seem, perhaps, an unnecessary mutilation to remove both pectoral muscles, and make a complete clearance in the axilla of everything save the chief blood vessels and nerve trunks. But obviously, the means justify the end if this be the only way by which a long period of freedom from recurrence of the disease can be secured. The point is really one of supreme importance, for it must be evident that unless a surgron is prepared to undertake the complete operation for cancer of the breast, such as experience has now proved to be necessary in the interests of the patient, interference on his part would be almost unjustifiable. The only thing which is left for surgeons to do while attempting the "radical" cure of carcinoma is to follow the line of practice, which experience has shown to be best, and thus there is no alternative in these cases than to excise freely even at the risk of removing tissues which do not happen to be infected.

Extrauterine Pregnancy at Full Term.

Swift (Boston Med. and Surg. Journal, May 12, 1898,) reports a case of this rare condition. The patient, aged 34, had been married 18 months. Three years before she had had some pelvic trouble, which was called ovaritis, and confined her to bed six weeks. Last regular menstruation was Jan. 21, 1897. The last February period was only a slight show, symptoms of pregnancy beginning at about the same time. On March 26 she had a sharp attack of pain in the abdomen, resembling the former attacks of ovaritis, and she was miserable for six or eight weeks. There were no symptoms of collapse with this attack, but a good deal of nausea, attributed to the pregnancy. She was first positive of feeling motion in July, and this grew stronger up to November 19, since which time it had entirely ceased. During the last two months the motion was said to have been very violent, and she thought the child at times must have been in convulsions. This motion was perceptible to friends through her clothing, and when lying in bed would move the bedclothes.

The fetal heart sounds had been heard from time to time by her physician. On November 19, at the closet, she felt a sudden gush of warm fluid from the vagina; there was no appearance of blood. Throughout the rest of the day there were regular but not severe pains. After that all motion of the child ceased, and she noticed that she was getting smaller. The breasts became hard, large and painful, and then gradually subsided. A week later her physician called and diagnosed the death of the child. After waiting a week, there being no sign of labor, he inserted a catheter into the uterus with the idea of inducing labor, but this not being effected, Swift was called in to empty the uterus. He diagnosed extrauterine gestation, with pseueudo-labor and death of the child, and advised waiting, to miminize the chances of hemorrhage from the placenta. On January 3, 1898, he operated. The child was easily delivered. In one place the side of the head was firmly adherent to the sac, which was attached to the intestine. The placenta was only attached to the upper edge of the broad ligament, probably the tube, for this could not be distinguished except where it left the uterus, and here it was much thickened. The patient made a good recovery.

The Diet of Dyspeptics.

The Editor of the Medical Times points out man valuable ideas in connectiony with the management of these troublesome cases. He starts out by asking: How shall we treat dyspeptics? Medicaments are not of much value, or play only a subordinate part. The main factor lies in proper nourishment. These patients, who have abstained from most kinds of food for years, must now learn anew to eat. Their stomach and intestines very quickly adapt themselves to this new condition. First and above all, it is of importance to increase the quantity of nourishment; second, to provide a sufficient variety of food.

In order to improve nutrition, two articles of food, which hitherto have often been avoided by laymen as well as physicians, play an important part. I mean bread and butter. Bread forms one-third of the total amount of ingested food in health, and besides having a nutritive value serves the purpose of increasing the flow of saliva during its mastication. It also creates an appetite for other food.

Butter not only improves the taste of various kinds of food, but is also in itself a nutriment of the greatest importance. The great number of calories which butter contains (100 grammes give 837 heat units, while the same amount of bread develops about 217) shows this in the clearest manner. Another advantage which butter presents is that its volume is only about one-third that of bread. A patient taking about one-quarter of a pound of butter a day receives therewith more than one-half of the heat units required. This quantity of butter is well borne by most of the patients.

As nutrition plays the principal part in the treatment of these patients, it will not be amiss to give a few hints with regard to its management. To begin with, it does not appear advisable to permit patients who have abstained for a long while from the coarser varieties of food everything at once. This abrupt change may at times be the cause of various unpleasant symptoms; therefore, it should be accomplished gradually. At first give, besides milk, gruels and thickened soups, eggs beaten up in milk, etc. A few days later begin to add to this bill of fare zweiback or crackers with butter. Then permit meat, the white of chicken and well-scraped beef; next mashed potatoes; still later give wheaten bread, baked or boiled potatoes, soft-boiled or scrambled eggs, oysters; at last allow vegetables and fruits.

An essential point with regard to nutrition is punctuality in the taking of meals. In most of these cases, in which a gain in weight is of great importance, frequent meals (five or six daily) will be advisable. Although it does not appear advantageous to prescribe for the patient the quantities of the various foods in exact weight (grains or ounces)—as by so doing they are too easily reminded of their ability or inability to digest this or that quantity and not more—it is nevertheless of value to mention approximate figures by which they may be guided or below which they shall not go.

Uterine Cough.

Schaeffer has come to the following conclusions regarding this reflex condition.

In those predisposed, such as neuropaths and sufferers from genital diseases (especially during menstruation and pregnancy), cough may at times be induced by isolated contact with the *fornix vaginæ*.

In those so predisposed, pathological processes which involve the broad ligaments, and especially Douglas' pouch, may cause reflex cough, just as they cause reflex acne and hypere-mesis. In the latter conditions abnormal fermentation and auto-inoculation are probably also present.

In those predisposed to cough as above stated, irritation of the lower third of va-

gina and vulva can occasion only local reflexes—nothing remote, such as a cough, can occur.

Uterine cough is produced by irritation, on one side, of the utero-vaginal fibres of the hypogastric plexus which supply the fornix vaginæ and collum uteri, and, on the other side, the spermatic plexus, hemorrhoidal nerves and ganglia imbedded in the broad ligament which supply the fundus uteri and ovaries.

Irritants which affect the nervous pudendus are at first localized in their reflex effects.

Reflex phenomena may be (a) essential physiological reflexes in remote motor and vaso-motor territories, which, through the neuropathic basis are easily set in motion; (b) radiation in the case of neuropaths, where resistance is weakened; (c) irregular radiation in high degrees of neuropathy.

Cases of tuberculous habitus, or predominance of stomach symptoms play a separate part in the genesis of nervous cough.

Local treatment, especially by pessaries, acts promptly when pathological conditions are complicated, as in the case of retroflexion and prolapse.

Urotropine in the Treatment of Cystitis.

T. Gordon Kelly, M. A., M. D. (The Therapist, Oct. 15, 1898) says:

I do not pretend in this short article to review the effects of the various urinary antiseptics, but simply to record my experience of the antiseptic treatment of cystitis, especially in regard to the exhibition of the drug Urotropine or hexamethylentetrainin lately introduced to the notice of the profession by Professor Nicolaier, of Gottingen.

It has now been decisively proved that the cause of cystitis is an invasion of the bladder by pathogenic micro-organisms, of which numerous varieties have been discovered in pathological urine. Normal urine is perfectly aseptic, but as Professor Elliott, of Chicago says, "the large amount of organic matter wich the urine contains renders it an excellent medium for development, should infection take place, in which event the bladder becomes converted into a veritable incubator for the propagation of bacteria."

In the treatment of cystitis, therefore, the first and main indication must be to render the urine antiseptic, which object accomplished, we are a long way on the road to our goal, the cure of the disease.

The principal drugs used for this purpose, I may say are salol, ammonium benzoate, boric acid, guaiacol, resorcin, benzonaphthol, sodium salicylate, creosote, etc. These drugs I have all found useful in rendering the urine antiseptic, and they have been extensively employed in the treatment of cystitis, but none of them in my experience could be called a perfectly reliable and satisfactory urinary antiseptic. One drug only in my hands answered this description and this was urotropine.

Urotropine is a non toxic and non-irritating derivative of formic aldehyde. It is formed by the action of four molecules of ammonia on six molecules of formaldehyde, and was first introduced to the profession by Prof. Nicolaier in 1895, who asserted that it possessed the power of dissolving uric acid concretions and also that taken *per ora* it prevented the development of bacteria in the urine. I have not had an opportunity of thoroughly testing its power of dissolving calculi, so cannot personally say whether it possesses this property, but in cases of cystitis and of phosphaturia its action has, in my hands, been almost specific, and I have been satisfied beyond all expectations with the result. Urotropine appears in the urine as early as fifteen minutes after its administration, and its presence can be recognized twelve hours later after a dose of seven and a half grains. It is soluble in 1–2 parts of water at 68 degrees Fahrenheit, and the reaction of its solution is faintly alkaline.

In some cases Urotropine is said to cause a slightly burning sensation in the bladder if large doses are taken, but no patient to whom I gave the drug ever complained of this to me. I will now give a few clinical illustrations of the action of this drug, in one of which I must say it was most brilliantly successful after every other drug of this nature had failed, and one which many eminent men had regarded as beyond medical treatment.

Case I.—A working man, 40 years of age. This man had suffered for a couple of months from gonorrhœal cystitis. There was considerable irritability of the bladder and tenderness on pressure. The urine was acid, and contained pus and a large amount of mucus. Urotropine was given in seven and a half grain doses in half a pint of aerated water three times a day. On the fourth day the urine cleared, and the pain was much better; and on the ninth day all discomfort disappeared. I continued the urotropine for three weeks in smaller doses, *i. e.*, seven and a half grains twice a day, at the expiration of which time the cure was complete.

Case II.—A case of cystitis, following catheterisation, in a man 68 years of age. The urine was very acid, contained pus and mucus in abundance. There was very great

irritability of the bladder, and most extreme pain following urination, and lasting some time. I prescribed small doses of citrate of potash every four hours, in addition to seven and a half grains of urotropine in half a pint of carbonated water three times a day. In two days the urine was clearer and the irritability less; in eight days the urine was clear, the pus had disappeared, and the patient said he was free from pain.

Case III.—A gentleman, 35 years of age. The patient was suffering from chronic cystitis, of fifteen years standing, complicated with attacks of profuse hæmaturia. For the past twelve years the attacks of hæmaturia had occurred at intervals of from three to six months, lasting some two or three days. This patient had previously been treated by various medical men, including many specialists in urinary disease, and he informed me that he believed "he had taken every drug in the pharmacopœia." At its first onset the hæmaturia had led to a suspicion of malignant disease, and later on to a suspicion of villous growths in the bladder, both of which ideas had been abandoned, and there now was little doubt that the cause of the hæmorrhage was a congestive cystitis, set up by the great excess of mucus in the urine, which contained pus and was alkaline. This seemed to me a case in which the astringent properties of urotropine on the vesical mucous membrane, and also its antiseptic effect on the urine, could be put to a severe test. I am, however, glad to report that in every way it was a complete success. I gave large doses of urotropine (twenty grains twice a day), as this was such a chronic case. In passing through the system a portion of the urotropine is decomposed and becomes formaldehyde, whilst another portion appears unchanged in the urine, as has been shown by Dr. Casper, of Berlin. It seems to me, therefore, advisable to give as large doses as possible in bad cases. In six days time the urine became clearer, but still remained alkaline in reaction. I therefore, as in some cases the formaldehyde is better liberated in acid urines, gave small doses of acid dil. sulphuric oil three times a day, in addition to the urotropine. In three days time, *i. e.*, nine days from the commencement of treatment, the urine became clear and slightly acid, and on the fourteenth free from pus. I may say that this was the first time the urine had been clear for fifteen years. I now diminished the dose, giving fifteen grains twice a day, which amount was taken for a month, at the end of which time I further reduced the quantity to seven and a half grains twice a day, which dosage has been taken up to quite recently. The patient's urine has remained from the commencement of treatment up to the present date (five months) perfectly clear and free from pus, and there consequently has been no return of the hæmaturia.

The points I wish to emphasize in this case are, the extremely chronic character of the case, the failure of all other drugs, both astringent and antiseptic, to benefit the case in the slightest degree, the rapid beneficial effect of the urotropine, and the fact that for nearly five months the patient took the drug without the least unpleasant effect.

In prescribing urotropine, my experience teaches that firstly the reaction of the urine should be discovered, and if very acid a little citrate or acetate of potash, or if very alkaline a little dilute mineral acid should be given in addition to the drug.

In conclusion, I may say that, in my opinion, we have in urotropine the most thoroughly reliable urinary antiseptic and astringent, and the one nearest approaching to a specific for cystitis and allied affections.

Shall It Be "Surgical Interference" or "Surgical Intervention."

Dr. Winn (Richmond Journal of Practice) says:

We have never understood why authorities in surgery use the word "interference" when speaking of operative or surgical treatment. When a surgeon performs an operation for the correction of a deformity, the mitigation of pain or the saving of life, does he mean to say that he interferes? If it be interference, then he is culpable; but certainly no operator will plead guilty to the charge of doing meddlesome surgery, and the inevitable conclusion is that the term "surgical interference" is a misnomer. Whenever we read it in text books, or in current literature, we feel like substituting the word *intervention* for "interference," using the word intervention in the sense of interposition, or better still, mediation—a coming between for a friendly purpose. The word interference suggests the idea of collision, clashing, opposition, officiousness, intermeddling, etc.

According to Webster: "A man may often *interpose* with propriety in the concern of others; he can never *intermeddle* without being impertinent or officious; nor can he *interfere* without being liable to the same charge, unless he has rights that are interfered with."

Let us see what Trench has to say. We quote: "In our practical use, *interference* is something offensive. It is the pushing in of himself between two parties on the part

of a third who was not asked, and is not thanked for his pains. and who, as the feeling of the word implies, had no business there; while interposition is employed to express the friendly, peace-making mediation of one whom the act well became, and who, even if he was not specially invited thereunto, is still thanked for what he has done."

A few days ago we suggested this improved phraseology to two of our surgical friends, both of whom are teachers of surgery and liberal contributors to surgical literature. They agreed with us that the point was well taken, and announced it as their intention to adopt the suggestion. Speaking for ourselves, this journal will hereafter use the term surgical *intervention* instead of surgical interference, and we shall hope to see its general adoption by surgical writers.

The Future of the Barber.

The Medical Press and Circular discusses this subject as follows:

"The barber is usually an intelligent man, comparing favorably with those whose callings do not bring them into daily and hourly contact with many men of all sorts. Very little compulsion would be required to induce him to qualify for the practise of the science and art of hair-dressing. A smattering of anatomy and physiology, a few weeks passed in manipulating the microscope, and a modicum of instruction in the identification of the microscopic lesions, would make an ideal barber of him, assuming, of course, that he has already received or will shortly receive, the training which confers the dexterity characteristic of the perfect barber. Such a course of education would enlarge the horizon of his ideas, and his conversation might conceivably become almost interesting. Moreover, his advice as to the relative merits of this or that hair wash would command respect on other than purely business grounds. We commend these observations to the professors of the tonsorial art, which has hitherto been allowed to languish as a trade, when it may conceivably be susceptible of attaining the dignity of a profession. To secure a permanent foothold to the tottering hair is as praiseworthy an achievement as to stop a carious tooth, and, to diagnose the *pediculis capitis* infers a skill equal in its way to that of giving name to the *odium albicans*. Why, then, should one calling be placed under the mantle of the General Medical Council, while the other is left out in the cold? The microbe of baldness would have been discovered years ago had barbers received this incentive to scientific observation, the more so as they have a vested interest in the hair of our heads, a denuded scalp defying their ministrations."

Cold-Air Treatment of Typhoid Fever.

Dr. J. Murray Gibbes (Australasian Medical Gazette) states that he recently addressed a letter to an eminent refrigerating engineer asking whether he could suggest for use in hospitals a better system for lowering the temperature of fever patients than that of a succession of cold baths; the temperature to be reduced from, say, 103 degrees F. to 100 degrees or 101 degrees F. The reply was to the effect that there was nothing to prevent the fever ward in hospitals being fitted up in such a manner as to permit of the reduction of temperature of any compartment down to as low as 5 degrees F., or its maintenance at any figure between that and the temperature of the external air by the mere turning of a tap, with the necessary plant upon the grounds, the cost of which would be within the means of a small hospital to meet. Such have usually a steam boiler, probably in connection with the pump. It would be only needful to lay down a small freezing machine and connect it with the fever ward —which would have to be insulated—by means of pipes, through which chloride of calcium brine circulated, abstracting both moisture and heat from the room, a tap regulating the flow. The machine is simple, and in addition to the service indicated, it would make ice for the use of the hospital. It could have attachments by flexible tubing for local applications of cold. In the case of ice only one temperature—viz., 32 degrees F.—can be obtained, but with brine circulation any temperature within the range of the machine, either above or below the freezing point, may be reached.

The advantages of the cold-air treatment of fever are the following:

No handling of the patient is necessary. He will lie on a mattress, and be covered by another, through which tubes will flow a cooling mixture when required to lower the temperature. There can be no doubt that experience will prove that this should be a continuous current, so that the temperature of the body can be prevented from rising above a certain degree.

Experience has taught that the cold treatment of typhoid, to be useful, must be carried out "systematically and with vigor," and that patients endured this repeated withdrawal of heat without experiencing any bad effects. Riegel proved that ice bags on the chest and abdomen were less

debilitating than cold baths, and the cold-air treatment will be found even less so.

The shock to nervous persons of being placed in a cold bath is avoided.

We can also, by turning another tap, have hot water to pass through the same tubes when necessary in the treatment of any disease.

We can keep the patient for any length of time surrounded by a cold atmosphere, continually abstracting heat, and so preventing him from rising to a dangerous temperature,and that without disturbing him. Cold-water tubes can be placed on any part of the body where necessary, as in disease of the chest.

There can be no doubt that the cold-air treatment proposed will keep down the high temperature of typhoid, and so greatly lessen the death rate, and can be carried out without inconveniencing the patient in the least.

As the temperature of typhoid patients is generally higher during the night than during the day, the cold-air treatment can be easier carried out, owing to the nursing staff being less during that time, and assistance not easily to be obtained.

The simple turning of a tap cannot be compared with the trouble entailed on the hospital staff in providing a cold bath. In fact, one nurse could attend to a dozen patients with less trouble than to one under the old treatment.

In other complaints the freezing-air treatments must prove invaluable, such as sunstroke and local congestions and inflammations of the chest, etc. Tube pads of various shapes could be made to fit different parts of the body for conveying hot or cold water.

The Smegma Bacillus.

Dr. J. L. Miller (Medicine, July) makes the following statement: Over the entire surface of the body and exposed mucous membrane, and especially on the genitalia, bacilli are found which resembles morphologically and in tinctorial qualities the bacillus tuberculosis. From the external genitalia they frequently gain access to the urine, especially in women, and may be a source of error in the examination of the urine for tubercle bacilli. The smegma bacillus presents wide variations in size and form, thus rendering morphological differentiation frequently impossible. While most smegma bacilli are more rapidly decolorized by any of the solutions commonly employed, occasionally they possess equal or even greater resistance than the tubercle bacillus. Methods of decolorization, when acids are employed alone, are especially fallacious; acid alcohol or dilute alcohols, unless long continued,are equally unreliable. Better, but not free from error, is the use of absolute alcohol for at least five minutes: in ammoniacal urine, however, such prolonged use of alcohol may also remove the stain from the tubercle bacillus. Attempts to remove the fat or fatty acids from the bacilli by either, chloroform, or other solvents fail to furnish us with a means of differentiation. We must rely on means of excluding the smegma bacillus from the urine. It has never been demonstrated in the bladder, and apparently seldom invades the deep urethra; therefore, by cleansing the external meatus and withdrawing the urine with a catheter we, can exclude this possible source of error.

Menstrual Secretion in the Fallopian Tubes.

Bond (Lancet) says the presence of blood-stained, mucus-like menstrual fluid in the lower portions of the Fallopian tubes duriug uterine menstruation having been shown to occur in some cases, the question arises whether it originates in the tubes, or is due to backward regurgitation from the uterine cavity.

This latter is a conceivable explanation, especially as in some of the cases in which the tubes were removed mechanical conditions, such as retroversion, were present, which might possibly favor such a process. Against this explanation is the fact that:

1. The secretion appears so early in the tubes coinciding with or even preceding the appearance of the flow externally.

2. That definite changes are found in the Fallopian mucous membrane itself.

3. Examinations of the uterus in women dying during menstruation are not common. But in a case of a young girl with healthy uterus in which at the post-mortem examination made ten hours after death the uterus contained menstrual fluid, blood-stained mucus was also found in the Fallopian tubes.

4. In casss of imperforate hymen with uterine distension, backward regurgitation does not occur, as a rule, into the Fallopian tubes unless there be infection and the contents be purulent.

5. Fxperimental evidence derived from the study of the subject in animals shows that no backward regurgitation from uterus to Fallopian tubes occurs; this forms the subject of further research, and will be brought forward later.

Assuming, then, that the fluid originates in the Fallopian tubes as a true Fallopian menstruation, this at first sight seems at

variance with the established fact that the fluid of the hydrosalpinx, or the accumulated secretion in a blocked and distended tube is a colorless watery fluid containing no blood. I have, however, ascertained that such fluid contains a very large percentage of chlorid of sodium in solution; this has a marked effect in breaking up red corpuscles and liberating hemoglobin, which may be thus absorbed. Possibly, also, a very slight increase of intratubular pressure, if constant, such as would arise early in a commencing hydrosalpinx, is sufficient to arrest the menstrual process in the very delicate tubal mucosa.

The occurrence of tubal menstruation, too, has an important bearing on certain cases of hematosalpix, in which careful search fails to reveal the presence of any tubal pregnancy.

The Treatment of Pelvic Suppuration.

Dr. Joseph Tabor Johnson (American Journal of Obstetrics) advocates the vaginal route in operating upon cases with pus in the pelvis, He brings out the following points: The vaginal section is very much more quickly done than the abdominal, and the convalescence is much shorter. There is little or no shock. The peritoneal cavity being seldom opened in these cases, except when hysterectomy is done also, much less traumatism occurs to intestines, bladder, ureters, omentum or abdominal wall, to greatly prolong difficult and dangerous operations. Drainage, being downhill, is not opposed by the laws of gravity, and is more natural, safe and copious. There is no ugly scar to annoy the eye and develop a painful keloid or permit a ventral hernia. The mortality of the vaginal operation for pus is vastly less than in that of enucléation of tobo-ovarian abcesses from above in the badly adherent and complicated cases. Experience has abundantly proved in more than a sufficient number of cases that the removal of the abscessed organs is not necessary to a symptomatic cure, and that a permanent and complete restoration to health is the rule, while a secondary operation later on is the exception. Should a secondary operation from above become necessary, its performance would be much easier and safer, on account of the freedom from pus and the improved condition of the patient. The perfection of the operation for draining double pus tubes through the vagina has opened the way for many other beneficent operations from below, including anterior and posterior colpotomy, explorations, hysterectomy, etc. Many patients who fear and will not consent to coeliotomy with its possible accidents, including intestinal injuries, the post-operative sequelae and the scar, the stitches, the bandages, the troublesome supporter for six to twelve months, and the possible hernia, will readily consent to vaginal incision and drainage, and vaginal hysterectomy when necessary. Vaginal hysterectomy with the ovaries left in situ is followed by much less nervous and physical disturbance than when the ovaries are removed and the uterus left, or than when they are all removed at the same time. If any or all of these advantages are admitted in favor of the vaginal operation over abdominal, then it must follow that it is our conscientious duty to operate by this route more frequently in the future than we have done in the past.

Operative Interference in Gastric Ulcer.

Dr. Hepdenreich makes the following statement regarding the indications for operative interference in ulcer of the stomach and duodeum (British Medical Journal).

In perforation, it is *absolutely* necessary as early as possible. Since 1894 the mortality after operation has fallen to 52.94 per cent. Without operation the condition is almsot necessarily fatal.

For stricture of the pylorus. In this condition it is hard to distinguish obstruction from swelling of the tissues around the ulcer or from pyloric spasm from true fibrous stricture. For the latter there are three possible operations: (*a*) Resection of pylorus; (*b*) gastro-enterostomy; (*c*) pyloroplasty. Of these the first is the most dangerous, and has no advantages over the others, unless they happen to be not applicable, as when the ulcer extends to the pylorus, or the pylorus is adherent, and its walls have lost their softness. When there is a choice between second and third methods, Mikulicz prefers pyloroplasty.

Operation may be required for adhesions or abscesses in connection with the ulcer. These are mostly very hard to diagnose, but it must be remembered that in some cases of persistent pain exploratory laparotomy is justified.

For hematemesis. Since sudden death is the exception, and many cases recover with medical treatment, the propriety of operation is still doubtful. Hartmann's twelve cases gave eight deaths and four recoveries. The author believes the chief point to be quantity of blood lost. For violent hemorrhage laparotomy has almost always failed. Sometimes the infiltration of the surrounding tissues has rendered excision of the ulcer or ligaturing the bleeding vessel impossible. Often the bleeding comes from a branch of the splenic artery, whose territory

is very difficult to reach, and sometimes the ulcer has been too small to be found. For slight hemorrhages, which becomes dangerous through repetition, operation may be successful. Usually pyloroplasty or more often gastro-enterostomy has been performed in such cases with a view to procure rest of the stomach, and conseuqently of the ulcer and its healing.

This last consideration has led some to propose gastro-enterostomy for cases of uncomplicated gastric ulcer. The general death-rate for all cases of gastric ulcer is 25 to 30 per cent., for gastro-enterostomy only 16.2 per cent., and therefore the operation has less danger than the disease. Another advantage of not waiting for complications is that the patient is in better health. At any rate cases that do not improve with medical treatment in a reasonable time should be treated surgically.

Treatment of Peritonitis.

Cripps (Med. Record, Oct. 8, 1898). As regards the medical treatment of peritonitis one of the most important and at the same time the most difficult objects is to prevent the administration of opium or morphine in any form. I believe this drug to be the frequent cause of death. In all cases of peritonitis, whether local or general, one of the worst features is the passive distention of the intestines with gas which they are unable to contract upon and expel; and I believe that the vomiting, shock, and other fatal symptoms are as much due to this distention as to septic absorption. The greater the distention the more powerless is the intestine to contract. Thus, then, the utmost trouble should be taken to prevent the distention getting to unmanagable proportions. Such distention is directly encouraged by morphine, for the first effect of this drug is to produce a temporary paralysis of the circular fibres, thus inhibiting peristaltic action. This gives relief from the pain, and the patient sleeps. What is the result? When the patient awakens a few hours later the condition has become infinitely worse. Nature all this time has made no effort to relieve the distention, and gas has accumulated beyond the power of expulsion. It is doubtless the temporary ease thus gained by smothering the pain that has made the administration of morphine so common a practice in the treatment of peritonitis. As a matter of fact, the sleep which the friends think so beneficial is the death warrant. Spasms of pain show that efforts are still being made by the bowels to resist distention and expel the fast-accumulating gas. The cessation of these efforts means that nature has thrown up the contest—a condition of affairs that morphine quickly brings about. I have heard it remarked that "it quiets the nervous system." It certainly does so, only too effectively.

The Treatment of Gonorrhœal Urethritis.

F. C. Floeckinger, M. D., (American Therapist, Sept., 1898,) claims that the two essential objects to be attained in the treatment of urethral gonorrhœa are:

1. The removal of the cause, i. e., the destruction of the gonococcus.

2. The restoration of the pathologically degenerated urethral mucosa to its normal condition.

For the fulfillment of the first indication many remedies have been lauded as specifics, and of late years special attention has been accorded the various silver salts.

Schaefer, of Breslau, a man of wide experience in this field of therapy, found that most of the silver salts possessed the power to destroy the gonococcus, but, unfortunately, simultaneously exercised an irritant or cauterant effect upon the urethral mucosa, and by the formation of a superficial eschar tended to prolong reparation and restitution to the normal. Both Argentamin and Itrol, while antigonorrhoics of no mean power, have been found open to this fundamental objection. Rohmann and Lierrecht, of Breslau, have more recently introduced Argonin (Argentum-Casein), a preparation which may be used in concentration without producing irritation of mucous membrane.

In about fifteen cases in my own practice I have introduced the endoscope after the application of a five per cent. Argonin solution and in no instance could I demonstrate any evidence of inflammatory reaction or the formation of a superficial eschar. Altogether I have treated 153 cases of gonorrhœa with Argonin, as follows:

Acute gonorrhœa,	46 cases.
Sub-acute gonorrhœa,	83 "
Chronic gonorrhœa,	24 "

Of the 46 cases coming under observation from two to five days after the invasion, I have been able in 32 cases to bring about a cure in from six to eleven days. In every case the discharge was examined microscopically and the specific diagnosis bacteriologically verified. The differentiation of anterior and posterior cases was made by means of the double glass test. After a preliminary cleansing irrigation with a weak potas. permanganate solution, 15 c. c. of Argonin solution, two per cent., was injected and retained for at least 10 minutes, and repeated once a day. The following

table shows the day of disappearance of the gonococcus in the acute cases:

ACUTE CASES.

Days.	Cases.
4	16
5	12
6	18

In none of these cases did any complication arise.

The results obtained from the use of Argonin in 83 cases of sub-acute gonorrhœa have been equally satisfactory. The following table shows the day of the disappearance of the gonococcus from the discharge:

SUB-ACUTE CASES.

Days.	Cases.
8	22
11	4
12	13
14	26
15	9
16	5
18	4

In sub-acute cases I commenced at once the instillation of a five per cent. solution, and in no case has this concentration produced irritation.

In chronic gonorrhœa—24 cases—I commenced the treatment by making one single application of nitrate of silver solution, 10 per cent., through the endoscope, following this with daily instillations of five per cent. Argonin solutions until the discharge had entirely ceased.

The following table shows the day of the disappearance of the gonococcus from the discharge.

CHRONIC CASES.

Days.	Cases.
6	8
4	1
11	7
13	1
15	4

Complications were infrequent, but when present were treated according to indications.

My clinical experience in cases of gonorrhœa in its various stages, treated with Argonin, led me to formulate the following conclusions:

1. That we have in this new silver salt a powerful antigonorrhoic, free from irritant effect upon the urethral mucosa.

2. That the treatment can be successfully applied without interferring with the patient's daily avocations.

3. That complications do not arise as frequently as when strong astringents are employed.

4. That internal medication is unnecessary in simple, uncomplicated cases.

Treatment of Abdominal Injuries.

Hyperesthesia of the abdomen after injury is an indication for operation. An increase in the respirations to twenty-eight or thirty per minute makes the indications absolute. Cold extremities are also significant.

The surgeon, says the Boston Med. and Surg. Journal, when confronted with gunshot wounds penetrating the abdomen, ought immediately to perform laparotomy, and look out for the various perforations of the viscera to see if he can close them, without waiting till peritonitis arise to force his hand.

Abdominal section is the only treatment to apply in contusions of the abdomen. It has been sufficiently demonstrated that the symptoms are not an adequate index of the gravity of the lesion or lesions; and, if we cannot tell what the injuries are, the only thing to do is to investigate. Mendy found that in 289 cases of contusion from the kick of a horse 30 per cent. of the non-operated patients died: and also 71 per cent. of those operated upon. These figures have no value; for, in many instances, no details were given, and in 18 out of 25 fatal operative cases peritonitis was already established. Of the writer's cases, 20 in all, 14 of the patients were operated upon, with two deaths, while, of the six not operated upon, two died.

Etiology of Leucorrhœa.

Waldo (The Post-Graduate, April, 1898). The causes of leucorrhœa may be divided into two classes—constitutional and local. Constitutional causes are anything that lowers the individual's general vitality, as any acute or chronic diseases, among them being fevers, rheumatism, gout, syphilis, anæmia, and chlorosis. Local causes are vaginitis, simple or specific; endometritis, cervical or corporal; salpingitis, when the products of the inflammation escape into the uterus and from thence out; polypi; fibroids, excessive coitus; ulcerations, simple, specific, and malignant; uterine displacements. When it is, strictly speaking, of inflammatory origin the discharge is constant, though at times it may be much more profuse than at others; but when it is due to a relaxed condition of the mucosa, it is very much increased and often is present only shortly before and a few days after the menstrual flow, or when the patient has been subjected to some unusual physical or mental strain.

The Widal Test for the Diagnosis of Typhoid Fever.

Dr. W. H. Welch, in a paper read before the American Medical Association, makes the following statements: Experience has demonstrated that the method of serum diagnosis of typhoid fever is of great practical value. The alteration of the blood on which this method is based is a specific effect of infection or intoxication with the typhoid bacillus. The microscopical serum test is to be preferred to the macroscopical methods. Quantitative determinations, relating especially to the culture, the time limits, and the dilution of the serum, are of importance, and, at least in doubtful cases, should not be neglected. As the reaction may be delayed or occasionally absent, a negative result of the test does not exclude the diagnosis of typhoid fever. The later in the course of the disease the test is applied, and the oftener the examinations are repeated at intervals, the less is the probability of the existence of typhoid fever, if the reaction is not manifest. The persistence of the reaction, sometimes for years after recovery from typhoid fever, is to be borne in mind in interpreting a reaction of febrile conditions. The appearance of the reaction and its increase during the period of observation speak for fresh typhoid infection. The danger of mistakes from positive reactions in non-typhoid cases can be guarded against in nearly all instances. Provision should be made, especially by the establishment and support of municipal or State laboratories, to render generally available to practitioners the serum method of diagnosis, as well as other bacteriological procedures of similar practical value.

Thrombosis and Embolism after Childbirth.

Singer states that thrombosis and embolism is an important complication of childbirth, and one which is often overlooked. According to the Medical News he has recorded thirty-five instances of its occurrence and from a study of these cases the following conclusions are drawn:

Formation of the thrombus is preceded by an irregular rise in the pulse-rate. This rise is associated with the development of the thrombus, and the maximum is reached when the thrombus is completely formed or symptoms develop in the lungs. The curve of the pulse is characteristic. In a typical pulse-curve in thrombosis the pulse rises, while the temperature remains normal. It remains high until the development of edema or a palpable hard cord or symptoms referable to the lungs cause the temperature to rise. If in the next few hours or days the temperature falls the pulse still remains high for some days longer. A variation from this type is found in those patients in whom other causes have reduced high temperature before the development of thrombus. In such cases the thrombosis is apt to be an infected one, and the discharges of the patient should be carefully examined in order to ascertain the character of the infection. Such examination will often reveal the presence of gonococci. The good results from the treatment of thrombosis follow its early detection, hence it is of importance to note carefully the pulse-curve as well as that of the temperature. Rest in bed is the most important part of the treatment. Above all things the patient must not be allowed to sit or stand up. The pulse is the absolute guide. The patient ought to be kept in bed at least three weeks after the pulse has become normal.

Microscopic Examination of Conjunctival Secretions.

Augieras (Journal of Eye, Ear and Throat Diseases, January, 1898).

As a result of microscopical investigation of conjunctival secretions the author presents the following *resume:*

Microscopic examination, after staining, of the conjunctival secretion, is useful for the diagnosis of affections of the conjunctiva and cornea. The presence of microbes is the rule in catarrhal conjunctivitis. It is the exception in eczematous conjunctivitis. In the conjunctival catarrh of the neonatus we find most frequently cocci and diplococci; in that of the adult, notably in chronic cases and acute attacks of chronic cases, we find most often the thick double bacillus. Fibrinous appearance of the pus indicates an eczematous condition of the mucous membrane. Eczematous secretions seem to be void of infectious qualities and unfavorable to the development of microorganisms. In a word, they are bactericidal. Absence of microbes from the secretion and fibrinous character of the pus are found also in severe ulcerous kerato-conjunctivitis of eczematous nature. One sees in the pus of certain cases of infectious ulcer of the cornea small thin bacilli, deeply stained by methyl-violet, which are also found in the pus of certain dacryocystites. Although it has not been absolutely, positively demonstrated that eczematous affections of the eye have an exclusively diathetic origin, it is very improbable that they have as a cause a local infection of the conjunctiva and cornea.

The Extra-Corpuscular Life of the Malarial Plasmodium.

While considerable variance of opinion will continue to find expression in regard to the extra-corpuscular life of the malarial parasite, the brilliant investigations of Surgeon-Major Ross of the Indian Medical Service have undoubtedly led to a climax being reached. The announcement that Ross had established an absolute proof of the infection of birds with the malarial parasite through the agency of mosquitoes has settled speculation regarding the role played by this insect in the dissemination of the disease. The notion that the mosquito plays an important part is an old one, and was indeed held by Laveran himself. It remained, however, for Ross to confirm this idea by a series of painstaking observations, which have seldom been equaled for brilliancy or effectiveness.

Dr. Patrick Manson (Medical Age, Oct. 10, 1898) in a paper read before the Section of Tropical Diseases in the British Medical Association, has shown the various steps in the inquiry in which Ross has been engaged. He first of all found that the mosquito, in imbibing human blood, ingested the parasite. His investigations were directed to the flagellated body, which as an adjunct of the parasite has been a subject of endless debate. Ross observed the formation of the flagellum in the mosquito's body. A vast amount of controversy has taken place regarding this flagellum. Many distinguished bacteriologists have considered it a degenerative feature in the parasite's life, a sure indication that it is about to die; but Manson and Ross have always maintained the reverse proposition, that it was a sign of vitality, a token that the organism was about to assume a new phase of existence, and that the flagellum itself represented the reaction of the parasite to a medium of increasing viscidity. They had shown some time previously that if blood be collected under vaselin, the flagellated stage is not as a rule apparent. In the body of the mosquito Ross observed the flagella break away and assume separate existence, so he surmised that the parasite entered upon a new phase of life in the mosquito's stomach. The nature of the problem presented in these facts Ross decided to work out in birds.

Birds suffer from malaria and two forms of the parasite are recognized in their blood, known as proteosoma and halteridium. Ross allowed mosquitos to feed on birds afflicted with proteosoma, and found that the parasite entered the mosquito's stomach. An hour later, examining his mosquito, he found certain oval pigmented bodies in the muscular lining of the stomach, which he inferred were a developed stage of the proteosoma, for in hundreds of test experiments these pigmented bodies only occurred in mosquitos fed on proteosomatous birds. That these bodies were evolutionary forms of proteosoma was almost confirmed by the previous example of halteridium, the other malarial parasite of birds. In this organism, after the flagellum had broken away it entered the pigmented halteridia, and these being transformed into traveling vermicules, possessed the power of entering the corpuscles. Ross inferred the same thing to occur in proteosoma, that the traveling vermicules entered the mosquito's stomach and there became the pigmented bodies. The further course of evolution of the proteosoma in the stomach is highly interesting. It grows in size and projects rounded bodies beyond the stomach walls. These Ross terms proteosoma coccidia. These coccidia undergo changes of appearance. Pigment comes and then disappears, but they finally burst and from them emerge germinal vermicules. These vermicules practically infested all the tissues of the mosquito, and what was highly important, these parasites were discovered in the venemo-salivary glands of the mosquito. The climax of these brilliant investigations was now within easy reach. Ross allowed mosquitoes to feed on birds afflicted with proteosoma, and after a few days he fed them on birds whose blood was void parasitic infection. The blood of the latter in a few days was filled with proteosoma, thus inevitably establishing the fact that the mosquito acts as an extra-corporeal and intermediate host of the malarial parasite.

The fact that the mosquito begins and ends its life in water may furnish an explanation of the doubted malarious nature of swamps. Direct mosquito infection is probably less common than indirect, but, that this interesting animal acts as the extra-corporeal host of the parasite seems substantiated beyond all chance of contradiction.

Disinfection of Hands.

This subject, which is of such great importance in clinical surgery, has been carefully studied by Weir, whose investigations have led him to make the following suggestions (Boston Medical and Surgical Journal).

The solutions of corrosive sublimate are unreliable. That such disinfection is far best applied (and in the order named) by the use of nascent chlorine, alcohol, or potassium permanganate. That chlorine is

satisfactorily evolved by the conjoined use of moistened chemical chlorinated lime and crystallized sodium carbonate. That of these three procedures the chlorine treatment is least hurtful to the hands—alcohol the most trying. The author has devised a simple, easy and inexpensive, yet efficient method of obtaining the sterilization by nascent chlorine. After the usual scrubbing with soap and water, and the use of green soap, and cleansing the peri-ungual spaces, one or more large crystals of carbonate of sodium (washing soda) are taken in one hand and covered with about a tablespoonful of bleaching powder (chlorinated lime), and enough water is added to make a thin paste, which at first feels warm, and from which fresh chlorine gas comes. This is rubbed for two or three minutes over the hands, nails and forearms until a creamy paste is formed, or until the sodic crystals impart a cool sensation, or until the rough grains of bleaching powder have mostly disappeared, when the hands are washed in sterile water.

Suicide and Sex.

Dr. Alexander Haig (British Medical Journal, Sept. 10th) believes that mental depression and melancholia are due to defective circulation in the brain; and that this is due to the blood being rendered impure by the presence of uric acid, and that this uricacidæmia or collæmia is the result of error in diet, and can be controlled or removed by altering it. The great preponderance of suicide in males may be due to several factors: Men are more exposed to weather than women, and exposure may be equivalent to living in a colder climate, which we have already mentioned. Men eat, he believes, more, often much more, meat than women. Women excrete as, he has shown, large quantities of uric acid every month at, or just before the monthly period, so that, other things being equal, they will have less retention and accumulation than men; this monthly plus excretion accounts for the fact that when they do commit suicide it is often at the monthly period. Again, women suffer much less than men from gout on the one hand and stone and gravel on the other. In just the same way life fluctuations explain why women suffer more than men from 15 to 20 years of age. The uric acid stored or retained in the rapid nutrition of girls about 13 or 14 years, which comes to an end at about 16 or 17 years, passes through the blood about and after these latter ages, and accounts for the blood and circulation changes which end in chlorosis, headaches, depression, epilepsy and suicide. The opposite side of this picture is the rapid nutrition, and retention of uric acid at 13 years with the acute rheumatism it produces; in such girls we often get a complete alternation rheumatism and anæmia, with headache, epilepsy depression and suicide as more occasional co-results.

Honest Surgery.

No surgeon should undertake an operation until he has carefully weighed the probable result to his patient. A remark like this seems almost superfluous and uncalled for, but, to the shame of many workers in surgery, it must be admitted that too frequently the future welfare of the patient is entirely overlooked. Particularly is this so in hospital work, for the zealous surgeon, in his desire to operate on many cases, sees only the indication for operation. And without taking into consideration the condition of his patient, or the probability of ultimate success, he preforms an operation which, though successful from an operative point of view, in its remote results leaves his patient in a worse condition than before. Faultless technique and primary union are not the only elements of a successful operation. Justifiable surgery is that which first and foremost considers the patient's welfare. Will the results of operative treatment, both immediate and ultimate, be sufficiently beneficial to justify the risk and inconvenience to the patient? It seems to us that the answer to this question should alone determine the decision of the surgeon to operate or not to operate, A surgeon who regulates his operative work by the above question may feel that he is not only true to his professional calling, but just to his own manhood and character.

Auto-intoxication and the Nervous System

Brower (Journal Am. Med. Association, March 12,) contributes an article on this subject. Among the points brought out we note the following:

Some of the nervous diseases, are the product of auto-intoxication. This atotoxis produces a parenchymatous degeneration of the nervous system, acute or chronic, which may result in the destruction of the structure and function of the nerve cells. The peculiar arrangement of this lymph channels in the nervous system makes auto-intoxication of the brain possible by the blocking of these channels. The principal factor in this autotoxis is a disordered gastro-intestinal tract. Gastrectasis, intestinal dyspepsia and coprostasis are ordinary conditions

producing gastro-intestinal intoxication.—The diagnosis is to be made: (a) by a regional examination; (b) by examination of gastric contents; and (c) by examination of the urine. The urine will show increased amounts of indican, diminished total sulphates, and an increase of conjugate sulphates. In consequence of this autotoxis, there will be a diminution of hæmoglobin and of red corpuscles. Treatment should consist of lavage, enteroclysis, gastro and intestinal antiseptics; laxatives and hematinics.

Fowler's Method for the Radical Cure of Inguinal Hernia.

Dr. G. R. Fowler sums up the essential steps of the operation as follows: (Medical Record Oct. 8, 1898). A curved skin incision which furnishes easy access to all the parts involved in inguinal hernia. Splitting the anterior wall of the inguinal canal from the external to the internal ring. Isolation of the cord and sac together from the surrounding parts, after which these are separated from each other and cleared well up to the internal ring. Double ligature of the deep epigastric artery, with sufficient space between the ligatures to permit of incision. Cutting away of the neck of the sac and incision of the posterior wall of the inguinal canal and Hesselbach's triangle. The cord is transplaced into the peritoneal cavity from the site of the internal to a point below the level of the pubic bone. Broad approximation and suturing of the peritoneum and transversalis fascia in front of the cord for the space mentioned. Obliteration of the internal ring and inguinal canal by accurate suturing, and strengthening of Hesselbach's triangle and the new point of emergence of the cord by outward displacement of the pubic attachment of the corresponding rectus muscles.

Consumption and Marriage.

In an article in a London weekly paper on consumption and heredity, Dr. Wilson says: (The Dietetic and Hygenic Gazette, Oct., 1898.) "I suppose in a higher era of things we may hope for disapproval of marriages between those who come of a tuberculous stock, or between any healthy and any tuberculous individuals—that is, assuming the taint to be present on one side only. The danger of unions of the latter type is that the affected partner may infect the healthy one. Affections are the last items in the category of human emotions to bear being talked to or advised by science, and I have, therefore, discounted any criticism of my opinions by assuming that it would only be in a higher era of things when the value and nobility of health are better appreciated, that the people will refrain from unions that can only result in the propagation of disease. What applies to tuberculosis in this aspect of affairs applies to many another hereditary ailment. I often think of the sarcasm with which a philosopher from another planet might greet our practic on this, when he witnessed the intense and jealous care with which we insure the health and physical perfection of horses, cattle, sheep, dogs, and even our pigeons, while as regards our own hereditary history we are absolutely careless. It is an old, old story this, the problem of inheritance; but despite the plain evidence that disease can be and is transmitted often to the utter undoing of a family, we proceed placidly to ignore all the teachings of science in the matter and raise races of weaklings, born only to die prematurely.

X Rays in the Army.

Dr. William M. Gray, the microscopist of the Medical Museum at Washington, was detailed by that institution for surgical work in the war, with special reference to the diagnosis of gun-shot wounds by the Rontgen rays. In giving the results of his observations Dr. Gray says, (Cincinnati Lancet Clinic.) "We took out bullets by the pint on board the 'Relief,' and almost without exception they were located by the X rays. It is all done in a few minutes; five seconds for a wound in the hand, thirty seconds for one in the foot, and not over ten or fifteen minutes for a wound through the pelvis. The patient is stretched out on a table, the X-ray bulb adjusted over the wound, the plate put under the limb or part where the wound is, and the thing is done. The plates are developed almost instantly. In many cases we saved hours of vain searching; not infrequently we save the soldier's life."

The Action of the Gastric Juice on the Bacillus of Tuberculosis.

According to Dr. Sabrazés, the bacillus of tuberculosis is not appreciably modified by the action of the gastric juice either in form or straining reactions, that the greater part of the elements which constitute the bacterial cell are not susceptible of digestion by the gastric juice towards which the cells act in the same manner as cellulose and nuclein. This latter body indeed would appear to enter largely into the composition of the bacteria. The bacillus did not lose its vitality or its virulence until after thirty-six hours' contact with the gastric juice.

It could then be injected subcutaneously in guinea-pigs without determining any local lesion, but after each injection the animal lost weight to a marked extent, though this was promptly recovered from. The susceptibility of the guinea-pig was not diminished by these injections; indeed it appeared to be enhanced thereby. These researches emphasize the necessity for the sterilization of articles of food, seeing that Koch's bacillus is not amenable to the solvent action of the digestive fluids.

A New Method of Treatment of Inflammatory Pelvic Troubles.

Pincus is of the opinion that the treatment of inflammatory and exudative processes in the parametrium, pelvic peritoneum, and tubes ought to be a non-operative one. Surgical measures are to be regarded as a last resort, except in case of those who are unable to afford the time and the money for a conservative treatment.

The object of treatment should be, surgically speaking, the attainment of perfect rest of all the organs of the pelvis.

This is only to be secured by: increase of the abdominal blood-pressure; assistance of the venous current in its return; great rapidity of the lymph stream, with the help of gravitation; elevation of the organs of the pelvis, at least the affected parts being lifted well out of the cavity of the pelvis; the greatest possible immobilization of the affected organs.

To accomplish these ends the patient should be placed on an inclined plane, making an angle with the horizon of from 12 deg. to 35 deg., and compression should be exerted upon the abdomen. By auto-transfusion the medulla and the heart are stimulated to greater endeavor. Respiratory gymnastics should be practised to increase to its limit the aspirating power of the respiration. The diet should be carefully looked after, and not only the strength but the weight of the patient be kept up, so that the normal fat around the pelvic organs may not be wanting.

Treatment on an inclined plane should be continuous, interrupted only in those cases such as puerperal ones, in which there is a uterine discharge, or in which douches have to be given, etc.

Compression is either direct or indirect. Direct pressure may be accomplished upon the abdominal wall or through the vagina. It is usually best to exert pressure in both ways at the same time. Vaginal pressure is in most cases no more than the immobilization of the pelvic organs. Abdominal pressure may be produced by an elastic bandage, rubber plaster, a bag of meal, or by moist potter's clay from two to ten pounds. Vaginal pressure may be produced by an air pessary, by a colpeurynter, or by tampons. All of these should be perfectly aseptic.

Pressure should be continuous or intermittent according to the nature of the case. In acute cases it should only be applied in conjunction with inclination of the body, and should be employed only so far as fever and pain are thereby reduced. In chronic cases pressure should be continuous, unless pain or fever manifests itself. Pelvic massage is of great assistance in such cases.

This method of treatment, combining compression with the force of gravity, is of great service in all affections in which there is hyperemia of the pelvic organs, or in which it is desirable to improve the position of the uterus, or to loosen adhesions, as well as in the troubles already mentioned. The most striking benefit is received in chronic cases of parametritis, pelvic peritonitis, and affections of the tubes. The length of treatment varies according to circumstances from a few days to several months. In chronic cases, whenever possible, the patients should be up and about. At night the inclined position should always be taken, as well as occasionally during the day, but at other times the effects of elastic bandages on the abdomen and vaginal distension are sufficient to achieve the end sought.

If in spite of treatment the exudate does not grow smaller—this may happen in puerperal parametritis—and even with a light fever there is loss of strength, there is not only pus present, but most probably a perforation as well, which must be treated by operation.

Heart Complications in Diphtheria.

Dr. Cleon M. Hubbard (Boston Medical and Surg. Journal,) has given this subject considerable study. The results of the post-mortem examinations in the seventy-two fatal cases which he records are not given in the report, and these results are largely drawn upon in formulating the following conclusions reached by the author:

A rapid pulse rate in diphtheria is to be dreaded. Death usually results when it exceeds 150. A slow pulse—60 in children—is a sign often of serious heart trouble. Irregularities in the pulse occur in about 10 per cent. of the diphtheria cases, and are generally significant of cardiac complications. A systolic murmur at the apex is heard in about one case in ten, and its prognostic value depends upon the nature of the case. A *bruit de galop* in diph-

theria is a fatal sign. After four weeks, with no heart symptoms in diphtheria, there is little probability of subsequent cardiac trouble in the convalescence. All diphtheria patients who have tachycardia, bradycardia, irregular or weak pulse, a systolic murmur at the apex, vomiting or any paralysis—especially palatial—should be kept quiet in bed. The most important element in the treatment consists of absolute rest in bed. The vagus nerve in the fatal cases always had some evidence of degenerative changes. The weight of the heart was increased. The cause of death is usually from cardiac thrombi, dilatation or paralysis, produced most probably by that toxin of the diphtheria bacillus.

White Bread or Brown Bread?

The British Medical Journal quotes a few remarks made by Drs. Brunton and Tunnicliffe on the relative digestibility of white and brown bread. On the strength of certain experiments, they feel justified in concluding that the higher nutritive value which might on purely chemical grounds be ascribed to brown bread cannot be maintained from the physiological side. As to fats and mineral constituents on the other hand, distinctly less of the nutritive materials actually get into the blood in the case of brown than of white bread. White bread is, weight for weight, more nutritious than brown. It thus would appear that the preference given by operatives in large towns to white bread has, to a certain extent, a sound physiological basis. In the case of people with irritable intestines white bread is to be preferred to brown. In the case of people with sluggish bowels brown bread may be preferred to white, as it tends to maintain peristalsis and insures regular evacuation of the bowels. If the proportion of mineral ingredients, and especially of lime salts, in other articles of food or drink be inefficient, brown bread is preferable to white. It is possible that in the case of operatives living chiefly upon bread and tea, the preference for white bread which prevails may be responsible, in part at least, for the early decay of the teeth. An abundant supply of mineral constituents is especially required in pregnant and suckling women and in growing children, in order to supply material for the nutrition of the fetus, for the constituents of the milk and for the growth of the tissues, especially the bones. In such cases, if mineral salts, especially those of calcium, be supplied by other foodstuffs, drinks, or medicines, brown bread is preferable to white. Drs. Brunton and Tunnicliffe believe that if the dietary be insufficient in fat, or if the patient be unable to digest fat readily in other forms, brown bread may possibly be preferable to white. They dwell on the absurdity of taking the more chemical compositions of a foodstuff as an index of its nutritive value. "A stick of charcoal, the atmospheric air, a little water and some sea salt contain all the elements of a typical diet, and in ample quantity." Hence, it is not always a question of what a foodstuff contains, but how it contains it.

The Question of Obstetric Douching.

Robert Jardine (British Medical Journal, Sept. 17th,) concludes that in an ordinary case ante-partum douching is unnecessary, and, in fact, is as likely to do harm as good. "If an antiseptic like corrosive sublimate is used, it will corrugate the tissues, hinder the descent of the presenting part, and render the tissues far more liable to being lacerated." A douche before delivery is necessary only when there is a purulent or putrid discharge from the vagina, or when any intra-uterine operation needs to be done. An immediate and copious post-partum vaginal and uterine douche is indicated in the following conditions:

1. Post-partum hemorrhage—very hot. 2. Purulent discharge previous to labor. 3. Putrid fetus. 4. Introduction of hands or instruments into the uterus. 5. Considerable laceration of parts or very prolonged labor.

During the puerperium, the writer holds, the douche is quite unnecessary unless the lochia become putrid or when the temperature rises and there is evidently something in the uterus.

On the Amount of Fat in the Milk of Nursing Women under Varying Conditions.

Dr. Gersoni has made two thousand analyses of the milk of three hundred and ten nursing women (Medical Record, Nov. 26, 1898,) to determine the proportion of fat contained in normal milk, and its fluctuation under varying circumstances. As the result of his labor the following data are presented: 1 The average per cent. of fat in the milk of a nursing woman for the entire period of lactation is about 3.48. 2. This per cent. varies greatly in different women and also in the same woman, the average amount being between 0.6 and 10 per cent. 3. During the first days of the nursing-period the milk is poor in fat, averaging about 3.03 per cent.; the amount of fat then gradually increases to about 3.8

per cent.; it remains almost stationary from the fourth week to the fourth month, when it again shows a tendency to increase. The milk of young women, of primiparæ, and of delicate women is richer in fat than is that of those more advanced in years, of multiparæ, or of robust women. 4. The quantity of fat is increased by moderate muscular exercise, by strong and frequent nursing, during the menstrual period, and also in fever. 5. A low meat diet has but very slight effect on the amount of fat. 6. A low or high percentage of fat in the milk is not of itself sufficient to cause gastro-intestinal disturbance; on the other hand, a sudden increase in the amount of fat may derange the child's digestion.

Medical Superstitions.

To cure a goitre, rub in oil from a lamp, especially from a lamp that has burned by a death-bed.

For gout, wear a copper ring made from a coffin nail, or carry a snake skin, potatoes chestnutss or the tooth of a mole, or a dried toad.

For alcoholism, drown an eel in brandy and make the drunkard drink it.

For impotence, drink a glass of mother's milk.

For stomach trouble, beer poured over a red-hot horseshoe is helpful.

To cure warts, rub the wart with a potato and give the potato to a pig.

If a child is puny or low in vitality, bore a hole in a young tree, at exactly the height of the child. Drive a plug into this hole along with some hairs of the child's head. The belief is as the tree continues to grow so will the child.

Freckles may be removed by washing in water contained in a hollow stump tree successive mornings before sunrise.

Reduction of an Old Dislocation of the Elbow-Joint.

William L. Rodman, M. D. (Pediatrics, vol. vi., No. 8, p. 361,) gives the history as follows: A boy, aged thirteen, while wrestling with an older lad, was thrown, and caught himself upon his hand; he felt as if he had sustained some injury of the elbow-joint, and he suffered considerable pain. Examination was made under chloroform, and the diagnosis was made of a sprain; no fracture or dislocation could be made out. There was considerable swelling for some days after the accident, and a second examination did not reveal any other trouble. On admission to the Hospital, an examination, and a skiagraph that was taken, proved that there was not only a dislocation, but a complete one, of both bones of the forearm. The boy was anæsthetized, and extension and counter-extension made; but after fifteen minutes' manipulation no impression could be made upon the dislocation. An Esmarch's bandage was then applied, and an incision into the joint made posteriorly. The coronoid process was found to be entirely lifted out of its rossa, and when it was reduced slipped out again. The olecranon was fractured, and the anterior ligament ruptured. The adhesions were so firm that they were separated by a chisel, and the head of the ulna reduced. The olecranon depression was absolutely filled with inflammatory and adventitious material. The adventitious material was curetted away, and the bones placed in position. Some trouble was experienced in lifting the coronoid process over the end of the humerus; but by taking an elevator, and forcing it over while extension was being made, it was put into a good position. In closing the wound, the sutures of strong silkworm-gut were carried down to the bone, and drainage was made with a strand of iodoform gauze. The arm was dressed in the straight position, and good recovery followed.

Dyspeptic Asthma.

Dr. Boas (Edinburg Medical Journal) says this is a condition in which the patients suffer from severe dyspnœa, sometimes almost to the point of suffocation, accompanied by symptoms of collapse, caused by disturbance of digestion, the symptoms disappearing after the irritation in the gastro-intestinal tract has been removed. He has observed eleven cases, four of which were mild, the remainder severe. Among the latter were three in which were also found changes in the lungs and heart, so that the gastro-intestinal irritation might be looked upon as the exciting cause of the asthma; in the other cases gastric or intestinal symptoms alone were present. The attacks occurred at intervals of days or weeks. Several hours—rarely immediately—after meals, after the presence of mild dyspeptic symptoms (eructation, feeling of fullness of stomach, &c.), there took place severe dyspnœa, accompanied by a feeling of fear, diffuse perspiration, and tympanitic distention of the abdomen; these symptoms lasted a few hours, sometimes all night, and usually disappeared after eructations of gas or vomiting. The examination of the stomach contents showed light secretory or motor disturbances in a few cases; in others the contents were normal. The writer believes

that dyspeptic asthma is due to reflex irritation from the stomach, causing insufficiency of the myocardium.

Surgical Experiences with Soluble Metallic Silver in the Treatment of the Septic Infection of Wounds.

Dr. Oscar Werler (Deutsche Medicinische Wochenschrift, No. 40, Oct. 6th, 1898) says:

Of the multitude of drugs that have in recent times been recommended for use in surgery and its related specialties, but very few stand the test of practical employment so entirely well as the silver preparations proposed by Credé as dressings for wounds. I refer to the citrate and the lactate of silver, but more especially to the colloidal silver which he has recently introduced. The remarkable physical and chemical properties of this allotropic modification of ordinary reguline silver, which is soluble in water, are of the greatest scientific interest, aad have been elucidated by O. Liebreich, E. v. Meyer, A. Lottermoser, and Dusterbehn in exemplary manner. Of pre-eminent interest to physiologists and pharmacologists, however, is the very valuable, and as yet unique, quality of the new, non-poisonous antiseptic, of penetrating the entire organism and effecting a general disinfection of the body.

The importance of such general antisepsis is very evident; but, until the present time, medicine has possessed no internal remedy of even comparative reliability to combat and destroy the bacteria and toxins in the circulation in the diseases caused by the invasion of the body of the septic infectious germs.

Credé is in fact the first investigator who has succeeded in filling this serious hiatus in therapeutics. Systematic chemical studies and bacteriological experiments have enabled him to discover a specific agent which removes the pathogenic factor by its powerful bactericide energy, without damaging the vital functions. Thus a rational cure is effected by therapeutically influencing those dreaded disease processes of septic nature. In its power of definitely "de-poisoning" the septically infected organism no other remedy equals the argentum colloidale; perhaps it is absolutely without competition in this direction.

The great importance of Credé's discovery in the general treatment of blood poisoning was at once recognized by competent authorities. This is proven by the clinical investigations by careful observers in the various specialties, the publication of which began immediately after the method of medication was announced, and which are constantly increasing in number. Thus the method is undergoing a conscientious investigation, and its indications are becoming more firmly established.

The results obtained by Credé were in every respect encouraging; as have also been those published by G. Wolfrom, Hale, Schirmer, and Weidmann and in numerous private communications made by colleagues. They show indubitably that the soluble silver has a decidedly beneficial influence, and often effects a rapid and even surprising cure, in fresh cases of septic infection; and even does so in chronic or creeping sepsis and furunculosis, when the treatment is begun in time, and before secondary changes have occurred.

There can no longer be any doubt that the argentum colloidale, employed in suitable cases and used by the right method, has shown itself to be a specific for sepsis. Many cases suffering from blood poisoning have been saved and cured by the use of this remedy alone.

Credé's report upon the usefulness of general treatment with the argentum solubile and the excellent curative results obtained with it in blood infections of septic origin, contained in the recently published reports from the surgical division of the Carola Hospital in Dresden, are, in my estimation, thoroughly decisive upon all points. It shows the signs of a careful study and scientific effort; and it deserves general notice and recognition in unbiased medical circles, so that the important therapeutic advance and the achievements of internal silver antisepsis may be generally recognized and spread.

In two extensive reviews I have recently published fairly thorough accounts of the nature and method of the internal silver treatment, with critical consideration of its value and advantages. These I published in the Dermatologische Zeitschrift at the suggestion of my respected teacher, Professor Lassar. In view of the importance of the subject, I think it proper to now record my own independently obtained information and more mature judgment. I am in a position to render that judgment very decidedly in favor of the new remedy; and I would emphasize the fact that I consider the discovery of this therapeutic agent as an occurrence of extreme importance in the treatment of general infections, and its introduction as a positive enrichment of our therapeutic armamentarium. A whole series of personal experiences and results obtained in practice recently in cases specially suited to the silver treatment, which have occurred in my polyclinic, have

brought me to this conclusion. Though my material includes as yet only three cases of pronounced septic disease, they were very characteristic from the pathological point of view, representing as they did the disease types af acute sepsis, chronic septic infection, and multiple chronic furunculosis. They were the more valuable for the purposes of scientific observation inasmuch as au accurate observation of the clinical course of the diseases and of the pharmacological effects were carefully made.

Case I. Ella L., 9 years old; August 23d, 1898. One week ago suffered a small wound on the dorsal side of the distal phalanx of the right forefinger, which healed spontaneously. Since two days there has been a reddened and spreading spot on the back of the finger, on which there has appeared a bluish-red vesicle, which has broken. Twenty-four hours later the hand became reddened, swelled up to the forearm, and was very painful. There was general malaise, anorexia, sleeplessness, headache, and fever.

Inspection showed a bluish circumscribed swelling on the extensor surface of the index finger, in the center of which was a crateriform ulceration with a discolored and blackish base. The entire back of the hand is œdematous, and the skin is red and shining. Palpation shows a diffuse œdema of the back of the hand extending onto the forearm, with elevation of local temperature and intense tenderness in the affected region. Careful pressure on the margins of the lesion causes the appearance of a small quantity of thick, bluish-red secretion. Pulse 120; the patient feels very weak. The diagnosis was therefore made ot an acute diffuse septic phlegmon of the back of the hand following the infection of the finger, with incipient general septicæmia.

Treatment: On account of the fulminating character and rapid spreading of the local infection, and the symptoms of general intoxication and blood poisoning, I ordered the following: ℞ Unguenti Credé, gram 1 (15 grains); Div. in chart. cerat. No. III. Sig. Inunction; directing the mother to inunct one package on the cleansed skin of the left, healthy, side of the body for 20 to 25 minutes in the evening. Externally I applied a cold wet dressing of a 1 to 4000 Citrate of Silver solution.

August 24th, 1898. A most marked change has occurred. The child is cheerful, feels stronger, and does not complain of pain. Pulse 108. Three hours after the first inunction there set in a quiet, continuous sleep, during which there was profuse sweating. Besides the improvement in the subjective symptoms, the local lesions, the wound and the septic phlegmon, show the marked and powerful action of the general silver medication. The ulceration looks healthier, and is less tender; the œdema and the inflammatory redness of the hand and arm is less marked. The most important effect of the internal silver antisepsis is seen in the stoppage of the centrifugal spreading of the acute septic phlegmon. A second inunction was ordered, with continuance of the wet dressing.

August 25th, 1898: Steady improvement in the subjective condition. Pulse 80. Can move the hand. No tenderness locally. The œdema of the back of the hand is diminishing visibly. The margins of the wound are flatter and less inflamed; its base is healthy and cherry red in color. Treatment continued.

August 26th, 1898: The third inunction was well borne. The general condition is excellent; the patient can move her index finger and the entire hand. The edges of the lesion are paler, and show whitish lamellæ of necrotic epidermis; its base is red and granulating. A fourth inunction was ordered for precaution's sake, and the local treatment continued.

August 27th, 1898: General condition entirely normal; wound healing.

August 31st, 1898: Œdema entirely gone; complete mobility of the joints. The base of the ulceration is filled with healthy granulations, and a layer of delicate epidermis is beginning to spread from its edges.

September 2d, 1898: Complete and healthy cicatrization.

The clinico-therapeutic history of this case shows conclusively that the claims made by Credé as to the specific curative action of the soluble metallic silver in acute general septic infection are entirely correct. For it proves that the early exhibition of the silver by the inunction method caused the sudden stoppage of an acute septic process occurring in consequence of an apparently insignificant but infected wound of the finger. This was effected by the first inunction; and in 30 to 40 hours the septic process had entirely disappeared, leaving behind, of course, the local lesion. It shows the absolute correctness of Credé's assertion that the symptoms of the general intoxication diminish 6 to 10 hours after the first inunction, as soon as no more new toxines are produced in the body. The first sign of this is the advent of sleep and of appetite.

The above case is a typical one of the acute form of blood poisoning so frequently seen in surgery; and its history may form the basis for the elucidation of the special indications for the use of the general internal silver antisepsis.

Case II. Marie Muller, married, aged 38; August 24th, 1898. The patient has never had specific disease. She suffers since four years from an obstinate affection of the skin of the heels of both feet, characterized by pachydermia, fissuring, and occasional weeping; some weeks ago it became so bad that she sought the aid of several physicians. In spite of this her malady got worse, so that she could no longer stand upon her feet. The most careful movement of the legs caused violent attacks of pain in the heel and entire ankle joint; the entire region was swollen and apparently infiltrated with pus, which frequently welled out abundantly from the fissures. Latterly her general condition has become bad, more especially as regards sleep and appetite.

Both heels are markedly fissured and swollen, and show numerous cracks and rhagades extending down into the subcutaneous tissue. No hyperidrosis. Over the external ankles the skin is inflamed and œdematous, looking shiny, red, and erysipelatoid, with a distinctly marginate circular edge. The entire calcaneal region and the phlegmonous areas around the external malleoli are extremely tender; there is a moderate œdema, an erysipelatous redness disappearing upon pressure, and increased heat of the affected skin. The entire region shows evidences of an old purulent infiltration of the tissues, with gradual undermining by the pent-in septic material. The diagnosis was chronic eczema of the heels with erysipeloid phlegmon of both external malleoli, and chronic septic infection.

Treatment: I first made an attempt with local antiseptics, using compresses soaked in a 1 to 4000 Citrate of Silver solution.

August 29th, 1898: Slight improvement in the condition of the heels; but the erysipeloid phlegmons have decidedly advanced, probably in consequence of the continuous absorption of pyogenic septic materials, and are as large as the palm of the hand. There is increased weakness, and headache. These symptoms of a chronic septic general infection caused me to prescribe: ℞ Unguenti Credé, grams 3 (45 grains), divided into three portions for inunction. The patient was instructed to inunct the contents of one package for 20 to 25 minutes upon the chest and back. In the night after the inunction the patient experienced a peculiar feeling of drawing and itching in both legs from the knee to the ankle.

August 30th, 1898: After the very first inunction there was a diminution in the subjective difficulties, a lessening of the cerebral confusion and the headache, and less difficulty in walking. Inunctions every other evening were ordered.

September 5th, 1898: Marked subjective improvement after four inunctions. Sensorium free, pain gone, sleep and appetite good. Painful facies vanished. The patient can walk without any trouble. The local lesions, more especially upon the right side, are visibly improved; the suppurative infiltration has ceased; and desiccation of the superficial epidemic layers has begun. The phlegmon of the right external malleolus has almost vanished. The left heel, where the septic process began somewhat later, is still inflamed, and there is pus there yet in the subcutaneous tissue. On the left external malleolus there is still a dollar-sized reddened, phlegmonous area.

September 8th, 1898: Patient has received seven inunctions, which she has borne extremely well. The general condition is excellent; the usefulness of her feet is nearly normal. The swelling of the heels has entirely disappeared, and under the exfoliating, diseased epidermis the new, healthy, faintly pink epithelium appears. The phlegmon over the right malleolus has entirely gone; the left malleolus is only slightly reddened.

The results of the therapeutic experiment for which this second case may serve show the effectiveness and value of the internal silver medication in the treatment of septic infection of the chronic and more creeping kind.

Credé first called attention to the fact that these forms of chronic sepsis occur with far greater frequency than is commonly supposed. The case in question is therefore an extremely instructive example showing the unmistakable utility of the silver inunction method, and a great superiority to the resultless measures of local therapy. The malady had been present for years, and had obstinately resisted all other remedies.

On account of the long persistence of the pathological phenomena of the chronic septic process, I continued the inunctions with the Unguentum Credé at intervals of two days until all the infectious matters were removed, and until the entire absorption of the material causing the local changes guaranteed the completeness of the cure.

Case III. Johanna T., married, seamstress, 53 years old; August 19th, 1898. Six weeks before the patient had burnt her left forearm with boiling fat, and was cured by the use of lime water and linseed oil. About eight days after the injury there appeared on the dorsal side of the wrist and on the anterior surface of the elbow joint two large ulcerations, accompanied by marked infil-

tration of the adjoining subcutaneous tissues. The entire forearm became painful, tense, and swollen, and the patient had to stop work. The abscesses were freely opened by long incisions, but the trouble did not cease. New furunculous infiltrations continued to appear upon the limb.

Examination showed marked swelling and redness of the entire arm up to the elbow. There were about 15 mostly superficial furuncles, varying in size from a pin's head to a pea; most of them are in the acute stage, though a few suppurating foci were already retrogressing. The affected areas were very sensitive. The auxiliary glands were swollen and beansized. Active and passive motion of the limb was generally impeded. No sugar was found in the urine. The general condition was bad; appetite, sleep, and strength were impaired, and there was severe headache. The diagnosis was chronic multiple furunculous of the forearm, with chronic septic infection. The treatment consisted of local disinfection by means of antiseptic dressings of 1 to 4000 Citrate of Silver solution.

August 22d, 1898: Her general condition getting worse, and new septic foci continually appearing, I had recourse to the general silver treatment, and ordered the patient to inunct 3 grams(45 grains) of Unguentum Credé in the healthy right side of the body for 25 minutes in the evening. A few hours after the first inunction she experienced formication in the skin of the affected arm. She took three inunctions upon three successive days.

August 25th, 1898: There is marked improvement in the subjective symptoms, especially in the sleep and the appetite, and he patient feels better in every respect. The local inflammatory symptoms, the redness and swelling, as also the pain have decidedly diminished, and the mobility of the arm has increased. The furuncles are all retrogressing, and there are no new ones. As the septic process, both local and general, have been brought to a standstill, the inunctions were ordered to be taken every second evening only.

September 2d, 1898: The patient has had eight inunctions, and praises them spontaneously. The general condition is excellent; the local symptoms have almost entirely disappeared; and the mobility of both elbow and wrist is normal. The furuncles have nearly healed, and only one new one has appeared in 11 days.

September 5th, 1898: The patient does her housework again. Two inunctions weekly were ordered.

September 9th, 1898: Ten injunctions in all have been taken; the patient is cured.

The excellent results obtained from the silver therapy in the two first recounted diffuse septic cases are quite equalled by the astonishing curative results obtained from Argentum Colloidale in this third case, which was a typical one of circumscribed suppurating foci in the form of a multiple chronic furunculosis. The effect of the internal silver antisepsis was so prompt that even after the third inunction only there was a complete standstill of the furuncular process; and after ten inunctions the patient's condition was so near the normal that the treatment was continued only for prophylactic reasons. My observations confirm the remark of Credé, that older disease cases require 5 to 20 inunctions. A proof of the reliability of the method of treatment by the internal silver medication is found in the fact that after its institution no further surgical measures were required on the furunculous nodules, and that the local relapses of this very painful disease ceased entirely.

In passing in review the clinical material herein recorded, and considering the cases on the one hand as regards their etiology, intensity, and extension, and on the other in regard to the general intoxication that resulted, it seems to me that the symptoms show a series of common features and pathognomonic factors.

In regard to the first appearance of the local septic process, the gate through which the infecting poison gained an entrance into the system was in every case a demonstrable antecedent lesion of the integument; once this was in the shape of a small wound of the index finger; once it was fissuring of the eczematous skin of the heel; and once, finally, a burn was the lesion. These lesions had an unmistakable pathogenetic rôle in the production of the general poisoning.

As respects the intensity of the blood poisoning it is notable that in the acute sepsis the symptoms appeared in an almost foudroyant manner; whilst in the two chronic cases definite symptoms showing the general effect of the septic matters were only noticable after the lapse of a varying length of time.

As to the extension of the septic process that occurred in the first two cases by spreading per continuitatem in the affected tissues; and in the third one by development of circumscribed infective foci. It is remarkable that in all three cases participation of the general organism in the septic infection from absorption of pathogenic material into the blood, and the more or less marked development of toxine effects, as shown by fever, headache, mental dull-

ness, insomnia, anorexia, and weakness, was distinctly shown.

This practical scheme of the symptomatology of these three septic cases shows not only the correctness of the diagnoses that were made, but also settles the basis of the indications for the employment of soluble metallic silver.

The diminution and disappearance of all the pathological phenomena of both local and general septic infection was evidently directly dependent upon the medication that was instituted. It is to be explained by the energetic internal antiseptic action of the Argentum Colloidale introduced into the blood. It is proven by the regular and careful observations that were made of the course of the disease phenomena.

I cannot, therefore, omit to emphasize the fact here that I attribute the rapid cure of these cases of septic infection directly to the inunctions of silver salve made as proposed by Credé. I regard the disinfection of the blood thus effected as the sole cause of the removal of the pathogenic etiological factor, and its action as the immediate agent in the cures.

My therapeutic experiences with the silver inunction method further demonstrate that the antiseptic influence of the internal silver treatment showed itself in all three patients, in the first place, in the betterment of the general condition from the cessation of toxine formation. The improvement occurred after the first inunction. At the same time the local changes caused by the presence of the pyogenic septic bacteria visibly diminished in extension and intensity, until the diseased tissues returned to their normal condition.

Whilst the results of my investigations show the intimate connection of the internal silver medication with the cessation of the disease symptoms of acute and chronic sepsis and furunculosis, they also demonstrate most completely that Credé's estimate of the value of the remedy in the treatment of blood poisoning was a correct one. They are a trustworthy and unassailable evidence of the efficacy of the Argentum Colloidale as a specific in cases of sepsis.

I can sum up the results of my clinico-therapeutic experiments in the following conclusions:

1. In soluble metallic silver we possess a valuable remedy for the successful treatment of blood poisoning caused by septic infection, when the diagnosis is correctly made, and whilst severe secondary affections are still absent.

2. The method of the internal silver therapy is suitable for both acute and chronic sepsis, and for furunculosis.

3. It is most energetically exhibited by means of inunctions with the Unguentum Credé, in which by percutaneous absorption the medicament is directly introduced into the circulation. In the blood the formation of the powerfully bactericide silver salts effects a general antisepsis and a disinfection of the entire organism.

To guarantee quality and efficacy of the preparation employed, I used in every case, following Credé's advice, the absolutely reliable Unguentum Credé, containing 15% of Argentum Colloidale, and prepared by the Chemical Works of Von Heyden in Radebeul, near Dresden.

I shall feel the greatest satisfaction if my researches into the action of soluble metallic silver stimulate my colleagues both at home and abroad to a more extensive investigation of this new, non-poisonous antiseptic specific for wound infections in both ordinary and military surgery.

Researches Concerning Infiltration Anæsthesia.

Dr. Heinze (Virchow's Archiv fúr pathologische Anatomie und Physiologie und fúr klinische Medicin, Band 153, Heft 3, pages 466 to 537, 1898,) records the results obtained in a very thorough and exhaustive series of experiments with the various proposed methods of local infiltration anasthesia, having been led to undertake them by the fact that there is as yet no authoritative comparison of the various anæthetics and their different concentrations and solutions for practical use. Most of the investigation that has been done has been purely clinical; but little of it rests even upon animal experimentation. It is only by trials upon one's own person that the details can be elucidated; and this method was the one the author employed in his comparative investigations.

The technique employed was as follows: A hypodermic needle of the finest caliber was inserted flat into the cutis of the fore or upper arm, and a small amount of the fluid to be tried injected. This amount was approximately the same in all cases, being sufficient to raise a lentil-sized endermic wheal. The sensations at the moment of injection were noted, and the changes of sensibility in the wheal found by means of pickings with a fine needle, and their duration noted. To obtain absolutely like conditions, for comparative purposes only often repeated directly consecutive experiments were used. The solutions were all at medium room temperature, since experimentation with an indifferent 0.6% salt solution had shown that solutions at a considerably

lower or a slightly higher temperature affected sensibility very little if at all. Anæsthesia dependent upon the low temperature of the solution employed rapidly passes off as it gets warm; whilst hot solutions are liable to damage the tissues,and their wheals remain red and painful.

Distilled water was found to be absolutely useless as a local anæsthetic on account of the preliminary irritation of the sensory nerves that it occasions from the imbibitory swelling of the cells. Solutions of the same specific gravity as the tissue fluids are the only ones which can be employed without disturbing osmotic effects, and are called by De Vries isotonic concentrations. The specific gravity of an isotonic salt solution varies in different animals. In the human subject it should contain 0.9% of sodium chloride. But the experimentation showed that within certain limits, from 0.6% to 2% the osmotic action was so slight that the injection was entirely painless. And in solutions of such concentrations the salt has no specific poisonous effect.

Salt solutions less strong than 0.6% cause imbibition by the cells and swellings; those of 2.5% and upwards cause dehydration. When the latter are used there is irritation; the center of the wheal sinks in, and appears as a depression surrounded by an œdematous wall, which persists for some time, whilst the wheal itself becomes somewhat larger. This phenomena occurs with any indifferent salt in similar concentration; with other materials the symptoms of dehydration are naturally masked by the specific action, irritant or paralyzing, of the drug itself. Hence experimentation with very dilute solutions of special substances can only be properly done with the addition of 0.6% of sodium chloride, which causes a like amount of swelling in all of them.

The author's conclusions differ from those of Schleich in regard to the painlessness and prompt anæsthetic effects of a 0.2% saline solution. Schleich has claimed repeatedly that this fluid when injected causes only a slight feeling of tension, and that it is a useful, practical local anæsthetic. Heinze found that a 0.2% sodium chloride solution is very painful to inject, that the anæsthesia therefrom is not complete, and that it is anything but a practical anæsthetic. He also sides with Custer in disputing the correctness of many of Schleich's assertions in regard to the action of neutral solutions and other fluids.

Sugar solutions Heinze found had no effect upon the sensory nerves. Bromide of potassium was an intense irritant, and did not even partially fulfil the requirements of a surgical anæsthetic. Pyroctanin (methyl violet) and methyl blue were still more unsuitable, since their actions were necrotic; the wheals always became gangrenous, and ulceration resulted. Caffeine and its salts were also found to belong to the class of painful anæsthetics, and their depressant action on the sensibility of the cutaneous nerves were found to be very slight.

Carbolic acid Heinze admits to be efficacious as far as its local anæsthetic effect was concerned; but it is practically useless on account of the dangers of carbolic acid gangrene. Even a 2% solution used on the unbroken skin has caused in Frankenburger's hands vascular stasis, thrombosis, and gangrene, due to the destructive effect of the carbolic acid upon the white and red blood globules. When we consider that in major operations the infiltrated tissues must remain for hours in the most intimate contact with the drug, and that these tissues are frequently already diseased, it is not surprising that gangrene should occur.

Heinze then proceeds to cocaine, remarking that the errors in Schleich's other conclusions necessitates a careful repetition of his experiments with this drug. The osmotic tension of cocaine, as of all alkaloids, is a very slight one, and a 3.7% cocaine solution is isotonic with a 0.6% saline solution. A 1% cocaine solution is isotonic with a 0.15% salt solution; and a 0.1% one is not distinguishable in its imbibitory qualities from pure water. The action of solutions like the latter is a mixture of imbibition and cocaine anæsthesia; the menstruum alone will cause a 15 minutes' anæthesia. The paralizing effect of the cocaine quickly masks the pain. The author admits that an anæsthetic effect without pain with a 0.02% cocaine solution is a "surprising result;" for one can readily convince oneself by trial that such a solution is very painful, and that a tender, red infiltration is left behind.

The author found that the lower limit of appreciable cocaine effect in an isotonic salt solution was extremely low down to 0.005% (1:20,000), and that such solutions were equally effective with watery ones, but the isotonic solutions did not injure the tissues, and the resultant wheals rapidly disappeared. Concentrated solutions, 3% and upwards, were found to be very painful, as Schleich remarks.

Morphine causes some anæsthesia according to Heinze's investigations. In the lower concentrations this is partly the effect of the menstruum, as is shown by the very violent pain, which disappears progressively with the higher percentages as the morphine effect gains the upper hand. The

use of all the solutions is accompanied by more or less violent paræsthesias. A 0.1% solution acts exactly like distilled water. Morphine, in spite of Schleich's assertion, is only active as a local anæsthetic in the stronger solutions, and always causes intense irritation. It is decidedly inapplicable for local infiltration anæsthesia.

As regards the solutions recommended by Schleich for local anæsthesia, Heinze found that in any surgically useful anæsthesia that its affects depend on the 0.2% of cocaine in solution No. I, and not on the morphine or the sodium chloride; the same is true of solution No. II, containing 0.1% of cocaine. In solution No. III the swelling and the cocaine combined cause a short, complete anæsthesia, obtained at the expense of violent irritation. On the other hand 0.01% of cocaine alone causes a temporary but painless analgesia.

Heinze therefore considers Schleich's solution No. III as entirely useless, whilst Nos. I and II are efficacious on account of the cocaine that they contain; but the effect is obtained at the expense of a considerable irritant and anxious effect. Schleich's anæsthesia is entirely a cocaine anæsthesia. A 0.8% sodium chloride solution containing 0.05% to 0.2% of cocaine is the most suitable mixture of the kind for local anæsthesia; any admixture of other substances impairs its value.

Formanilide Heinze found to be painful and useless; and the same is true of acetanilide or antifebrine. Antipyrine is extremely painful and therefore useless. Guaiacol and guaiacyl are equally inapplicable.

Of all the new local anæsthetics Eucaine, employed in the form of the hydrochlorate, has excited the most interest. Alpha-Eucaine, the salt first prepared, is closely related to cocaine; like it it is a benzoyl-methy lester, the basic substance ecgonin of cocaine being replaced in it by another piperidine derivative.

Its especial advantages over cocaine and other newer remedies have been claimed to be that it is less poisonous, that it can be sterilized by boiling, and that it is free from by-effects. Its possession of the first two quantities has been acknowledged by all authorities, as also its effectiveness for the production of complete anæsthesia; but the third one has been disputed, more especially as regards the presence of irritative effects. In ophthalmology, most particularly, this has been noticed.

Heinze has tested it in this respect, and also as regards its value for the purposes of infiltration anæsthesia. He finds that when watery solutions are injected they cause uncomfortable sensations that sometimes amount to pain. These sensations were least marked in 0.5% solutions; above and below that they were more noticeable. Eliminating the irritant action of the water by using in its place the physiological salt solution, he found that all the lesser strengths up to 0.5% were painless. He does not believe that Alpha-Eucaine can replace cocaine.

Vinci has proposed a modification of the drug which is known as Beta-Eucaine, occurring also as the hydrochlorate, and soluble up to about 5% in water. He claims that it has the same anæsthetic properties as Alpha-Eucaine, but has the advantages over it of being less irritating and less toxic. Silex has confirmed his statements, more especially as to the absence of irritative symptoms, and advises its use for the Schleich infiltration anæsthesia. Dumont and Legrand employed 1% solutions of Beta-Eucaine for the extraction of teeth, and published excellent results; the duration of the anæsthesia they found to be about one-third that of cocaine. Finally Lohmann employed it for surgical purposes in warmed 10% solutions, injecting 1 to 4 syringefuls; but he believes that as many as 30 could be administered. In no case were there any disagreeable by-effects, and the anæsthetic effects of the solutions were very high.

Heinze's experiments showed the complete equality of the Beta-Eucaine solutions with those of cocaine of equal percentages. This is dependent not only on the similar specific action of the two drugs, but also on the fact, as shown by Dr. Braun's investigations, that the osmotic tensions of cocaine and Beta-Eucaine solutions are about the same. Even the injection of 1% solutions show signs of swelling, approaching more nearly to those of pure water as the dilution is increased. All solutions of equal percentages, cause an anæsthesia lasting about 15 minutes. A specific irritant effect is caused by Beta-Eucaine even less than by cocaine; for the injection of more concentrated 5% to 6% solutions were painless, in contrast to cocaine solutions of similar strengths.

Heinze employed Beta-Eucaine in normal salt solution, and found that the intensity and duration of the anæsthesia was the same as that with cocaine. It was fully equal to the later drug. Its other qualities, above all its apparent much lesser toxicity, and the non-decomposability of its solutions on boiling put it practically far ahead of the older drug; so that it is decidedly to be preferred, Heinze concludes, to cocaine for the infiltration anæsthesia, and is far superior to the Schleich solutions.

Orthoform was next investigated. It was found that its solutions were decomposed by boiling, sometimes even by careless warming; that they did not keep, and that therefore tests of the solutions gave very variable results. Its employment for infiltration anæsthesia was hardly practicable. Anesine also cannot be boiled in solution without decomposition, and cannot therefore be effectively sterilized; the author doubts its usefulness for the purpose in hand.

In the concluding portion of his article the author calls attention to the importance to be attached to the tissue changes caused by the infiltration; being circumstances of equal moment with the anæsthesia itself. Hence the importance of the employment of solutions isotonic with the tissue fluids. Beta-Eucaine and cocaine change the osmotic tension of the fluids that they are dissolved in but little. He strongly recommends that Beta-Eucaine only be employed in the infiltration anæsthesia. It is the equal of cocaine in neuro-paralytic effect and absolute absence of irritation, and is superior to it in several ways. He recommends the following solution only for the infiltration anæsthesia:

Beta-Eucaine	0.1 grm. (1½ grains.)
Sod. chloride	0.8 grm. (12 grains.)
Dist. water	100.0 grm. (3¼ ounces.)

Such a stable solution, sterilizable by boiling at any time and as often as required, causes no swelling and therefore does no injury to the tissues; the Beta-Eucaine itself is the only anæsthetizing factor. The salt solution is not for the purpose, as Schleich erroneously believed, of effecting anæsthesia but to avoid irritation even under unfavorable circumstances, and of permitting the specific action of the anæsthetic to take place alone and unhindered.

Naturally the above solution, which Dr. Braun has now used for months, is absolutely superior to the mixtures recommended by Schleich, more especially for inflamed tissues; its action here, where it is important that it should be warmed to body temperature, is purely paralyzing and entirely non-irritant.

In spite of the erroneousness of many of Schleich's conclusions his name will always be coupled with that of the infiltration anæsthesia. He was the first to investigate it, to free it from its dangers, to introduce it into medical circles, and to perfect its technique.

Gynecological Axioms.

Dr. Goelet gives the following in the Virginia Medical Semi-Monthly:

Never use a pessary, except as a temporary or auxillary support. Alone it is powerless to effect a cure.

Never permit a patient wearing a pessary to pass from under observation. Make her understand that it is a foreign body placed temporarily in the vagina, and that it requires watching.

Never think a pessary can do no harm as long as it is producing no discomfort. If retained too long it may do serious damage without the knowledge of the patient.

Never retain a pessary if it is producing the least discomfort. Remove it or readjust it without delay. It is a mistake to think the parts will become accustomed to its presence and the pressure.

Never fail to impress upon the patient the importance of daily vaginal douches while wearing a pessary.

Never let the patient think a pessary will cure her. She will discover the truth some day, and you may lose her as a patient.

Never insert a pessary immediately upon discovery of the malposition, but first prepare the parts for it by appropriate treatment.

Never use a sound or reprositor for correcting the misplacement or for making a diagnosis. It is unnecessary and dangerous.

Never introduce a pessary unless the uterus is freely movable and can be replaced by manipulation.

Never permit a patient to leave the consulting room with a pessary that is producing the least discomfort. She should never be conscious of its presence.

Never be satisfied with a pessary unless it rectifies the malposition. If it does not accomplish this it is useless, and it may create some serious disturbance.

Never fail to seek the cause of the misplacement and endeavor to remove it. To To lose sight of this means failure.

Facial Erysipelas.

℞	Carbolic acid	½ ounce.
	Tincture of iodine,	1 ounce.
	Alcohol,	11 ounces.
	Oil of turpentine,	2 ounces.
	Glycerin,	3 ounces.

The lesions to be painted with this every two hours and covered with aseptic gauze.

Professor Graham recommends for a child suffering from Subacute Enterocolitis:

℞	Salol	℥ iss
	Bismuthi subnitrat	℥ iv
	Mucilag. acaciæ	f℥ j
	Aquæ	q. s. ad f℥ iij. M.

Sig.—A teaspoonful every three hours.

Also daily irrigation of the bowel with one gallon of normal salt solution.

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The Treatment of Strumous Glands in the Neck.

In discussing the question of the surgical treatment of tuberculous lymphadenitis, especially as occurring in the neck, Dr. Beatson points out that, broadly speaking, the main groups under which this condition presents itself are three in number: (1) A single movable gland; (2) a bunch of movable glands, all of which remain reparate and distinct from one another; (3) a large mass of glands matted together and embedded in dense fibrous tissue. (The Hospital, Oct. 22, 1898). When grasped it is felt that the mass, though movable as a whole, has firm and deep attachments, and that the individual glands composing it are blended one with another. Now, in dealing with such cases, in regard to the first two groups it is well to rely on constitutional treatment; but if resolution does not take place, and caseation and softening are imminent, to proceed to incision with complete evacuation of the contents by the sharp spoon, followed by stuffing with Berlin wool impregnated with iodoform, after the manner described by Stiles. In regard to the third group it is a different matter. The first thing to be done in such cases is, of course, to be sure that what we are dealing with is a local tuberculosis of the lymphatic glands, a condition unquestionably of an infective nature, as shown by its passing from gland to gland, and yet not necessarily part of a general tuberculosis. We must also be satisfied that the swelling is not of the nature of a lymphadenoma, nor of those forms of sarcoma known as lymphosarcoma and lymphatic gland sarcoma, and for this purpose a portion may be removed for examination. This point, however, having been cleared up much will depend upon the age of the patient. In young children excision is not to be recommended. Reliance must be placed on caseation and softening of the glands, with subsequent incision and scraping. No doubt some risk of general tuberculosis is run, but very young children do not bear well the lengthy and severe operative measures that such cases undoubtedly entail. It is defferent, however, with young adults. If they are otherwise in good health, excision is the best treatment for any big mass of enlarged cervical glands that, notwithstanding constitutional treatment, is increasing in size and extent. It must be remembered that the operative measures required are of a somewhat severe character, and may involve, as indeed happened in the case which served as a text for Dr. Bestson's remarks, removal of a portion of the internal jugular vein along with the diseased structures. If we were to make any comment on this teaching, it would be to the effect that the severity of the operation which is sometimes required, when the glands have become agglutinated by secondary inflammation, forms a strong argument in favour of operation at an early stage, even when they are single and distinct, without waiting for caseation and possible infection with pus-producing organisms.

Tuberculosis of the Middle Ear.

Winckler (British Medical Journal) describes 9 cases of this affection, the diagnosis of which is attended with many difficulties. The only safe sign is the demonstration of the presence of the tubercle bacillus in the exuded pus. In 5 cases the disease assumed an extended and fungating form; of these, 1, a child of 3, succumbed to tubercle in the region of the third ventricle, while the others, 2 of which were exhibited, recovered. In 4 cases the tuberculosis was of the ulcerative type; only 1 of these recovered, the others all dying of diffuse purulent meningitis. Of the whole 9 cases, in 4 the tuberculous process was limited to the ear; all these were of the fungating type, and they included the fatal one in this category. The author is of opinion that his results show the affection not to be perfectly hopeless. He hopes that when the diagnosis is made earlier, so that operation can be undertaken at a more favorably period, the results in primary tuberculosis of the middle ear will be still more favourable. He believes that in a number of cases early diagnosis is not impossible if the symptom-complex is carefully studied, and every suspicious case kept under continuous observation and frequently examined with the auriscope. The only treatment is to lay the affected portion freely open, including the antrum and the attic, if necessary to remove all the tuberculous material, pack with sterile gauze, and follow the ordinary treatment of consumptives. In those in whom advanced tuberculosis is present in other parts of the body, treatment of the ear is, as a rule, useless.

Professor Brocq recommends the following solution for Pruritus of the Scrotum:

Phenic Acid	ʒ v
Glycerin	ʒ iiiss
Proof spirit	ʒ vj
Water	ʒ x.

From one to four tablespoonfuls in a glass of hot water to bathe the parts three or four times a day, and twice a day a wafer containing sulphate of quinine and bicarbonate of sodium is swallowed.

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Vaginal Examinations and Vaginal Douches in Normal Labor.

George P. Shears (Med. Rec., Sept. 17, 1898, p. 405) sums up as follows:

The common custom of making frequent vaginal examinations during the whole course of labor is unscientific and unsafe, and it should be the aim of the conscientious obstetrician so to familiarize himself with all extravaginal methods of diagnosis as to reduce the necessity for vaginal examinations to a minimum.

All intravaginal manipulations are especially objectionable after delivery.

When the vaginal secretions are normal ante-partum douches are unnecessary and harmful. Upon this point the researches of Leopold and Goldberg, as well as those of Fischel and others, seem to be conclusive.

In normal cases the single post-partum douche is unnecessary and therefore objectionable.

The routine use of douches during the normal puerperum is contraindicated. Lusk says: "In hospital practice they have invariably increased the morbidity and the mortality-rate."

It is, of course, to be understood that these conclusions apply only to normal cases, and in no way forbid the most searching examination or thorough disinfection when indicated. Should a douche be necessary, then only a glass tube perforated at the sides should be used. The solution should be as hot as can be comfortably borne, but should not be too hot. As sometimes given, it causes unnecessary pain, and may even, by constricting if not actually cauterizing the superficial vessels, interfere with drainage, retard the necessary post-postum changes, and thus actually aid in producing sepsis. The tube should be managed without introducing the fingers. To distend for clots is to invite sepsis. Whether the air of the lying-in room may carry the germs of puerperal infection is still perhaps sub-judice, but there can be no doubt that freely to admit air to the vagina after delivery is the surest way to cause decomposition of coagula, previously harmless.

Dr. Oliver Wendell Holmes used to say of the study of pathological anatomy, that it is a good deal like the study of the fireworks after the Fourth of July.

The Association of Hysteria and Epilepsy

The expression "hystero-epilepsy," introduced by Charcot, in no way applies to the occurrence of epilepsy and true hysteria in the same subject. Joffroy points out, says the British Medical Journal, that these two diseases are sometimes combined, and that this combination often presents somewhat unusual features. Thus, he quotes the case of a girl who presented two forms of crises, the one characterised by vertigo coming on instantaneously without any precursory sign, and disappearing suddenly, At other times there was a preceding gastric aura followed by loss of consciousness for some seconds. The other form was preceded for a considerable interval by a condition of *malaise* with very marked sensation of globus, ending in a marked hysterical seizure, at times accompanied by loss of consciousness. Should this not occur there was a violent attack of crying. At the same time various stigmata were present, such as ovaralgia, complete left hemianesthesia, loss of taste and smell on the same side. There is thus no doubt as to the occurrence of hysteria in this case, and it is no less certain that true epilepsy was present as well. Joffroy quotes another example in which there was always an attack of hysteria major, followed by a state of drowsiness similar to that found in epilepsy. In other instances the epileptic seizure may precede the hysterical attack. The author finds that the administration of bromide modifies markedly the epileptic condition in such a manner that the case retains only the hysterical element. A noteworthy point seems to be that bromide treatment does not appear to reduce the frequency of the seizures, exerting its effect merely upon the epileptic element.

READING NOTICES.

Iquinin, Laxiquinin and Toniquinin.

Mechanicsburg, Ill., Nov. 3, 1898 .

Gentlemen:—About three months ago I received samples of Iquinin, Laxiquinin and Toniquinin, accompanied with literature concerning their formulæ, therapeutic value, etc. I had at that time under my care a little girl aged about five years, who was suffering from a stubborn and prolonged attack of Malarial Fever of the intermittent type, together with constipation. The chief difficulty I experienced in treating the case was due to the fact that owing to a sensitive nervous system and a delicate stomach, the sulphate and other quinine preparations could not be given in sufficient doses for any length of time. Whenever, owing to the disturbed nervous system or gastric derangement, it became necessary to withdraw the drug, the fever would return with renewed energy. I tried all the other remedies popular in the treatment of malarial troubles, but none of them gave the results that were obtained by the use of quinine sulphate, but as I stated before, I could not continue its use long enough on account of the disturbance it created in the nervous system and stomach.

When I received your remedies, I had about decided to send her to the mountains of Virginia, thinking that perhaps such a change would be of benefit, but after a few days treatment with Iquinin and Laxiquinin the change of climate became unnecessary. She has been taking Iquinin with occasional doses of Laxiquinin without experiencing any unpleasant effects, and has regained her health without the use of any other drug. I have used Iquinin in other malarial cases and find it to be a perfect substitute for quinine, minus the unpleasant effects sometimes obtained by the administration of that drug, I am also pleased with the results that I obtained by giving Laxiquinin in cases where obstinate constipation accompanies malarial troubles. It is a safe and pleasant laxative. I have also used it in the treatment of colds, etc., and am pleased to say that it has proved all that is claimed for it. I can constantly indorse your preparations and will continue to use them. J. H. Walkrer, M. D.

Many saline laxatives and cathartic pills are contra indicated in the treatment of habitual constipation on account of their tendency to deplete the system too rapidly. Physicians frequently report a progressive inefficiency from their continued use. Doctors say the more one takes of salts and pills the more constipated the system becomes, while on the other hand one enjoys both the methods and results when Syrup of Figs is taken; it is pleasant and refreshing to the taste and acts gently yet promptly on the kidneys, liver and bowels, cleanses the system effectually and overcomes habitual constipation permanently. The great trouble with all other purgatives and aperients is not that they fail to act, when a single dose is taken, but that they act too violently. Ladies and children enjoy the pleasant taste and gentle action of Syrup of Figs, find it delightful and beneficial whenever a laxative remedy is needed; for business men it is invaluable, as it may be taken without inconvenience and does not gripe nor nauseate.

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As a reconstructive food and alterative it meets every requirement of progressive alimentation. It not only furnishes assimilable nutritive material, but unlike other oils or emulsions, it does not excite repugnance and is well borne by the jaded stomach. Angier's Petroleum Emulsion with Hypophosphites is not only in itself nourishment that can be easily conveyed to the starving tissues, but it also, on account of the presence of petroleum, increases absorption and facilitates oxidation. In Wasting Diseases it is of paramount value, as it enables the patient to appropriate the maximum amount of nutriment from food taken. It increases the number of red blood corpuscles so that the effete products of combustion are properly eliminated and nature is aided in carrying on its work of reconstruction and repair.

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"The Latest News."

A friend said to me this morning, "What's the news?"

This is a habit that my brethren have. They expect me to be digging into new remedies all the time, and then have a chronic way of asking what the latest news in the Materia Medica is.

So on this occasion I answered,

"The latest news comes out of the South,"

My friend is a "jollier," and he replied,

"It comes "Marching through Georgia," I suppose?

Well, that was just it, exactly. The news is indeed from Georgia. From Atlanta, and from that Yoeman of the manufacturing chemist, John B. Daniel. Shakespeare was not among the prophets, but I confess that I read him this way "A (John B) Daniel come to judgment." John B. has done so much for the materia medica, and now he comes to judgment again.

Passiflora Incarnata he brings this time. There is a curious bit of story to tell about this. One Sunday last summer, a little Sunday School girl brought me a passion flower, and I found myself wondering why this plant which is thought so much of by the Church, has not been contributory to medicine. Following up the idea and in correspondence with physicians in the south (and, as well, in Mexico) I found that the "Granadilla" has its medical reputation. While I was still, somewhat idly, pursuing the line of thought, the soldiers returning rom the south, and from Cuba and Porto Rico, told that story that the "yellow" papers made so much of, that where they had eaten "Granadillas" freely, it had taken away all desire for stimulants and narcotics. Naturally, I "saw the chance of a lifetime," and it occurred to me that if we could get a reliable preparation of Passiflora before the profession, we should have in it the antidotal remedy for alcoholism and narcotism.

Going among the manufacturing chemists to find if there was a reliable preparation on the market, I found out just what I might have expected, and that was John B. Daniel is up-to-date, and already has a Concentrated Tincture of Passiflora before the profession.

And it will stay there.

The preparation approved itself in the laboratory at once.

I do not need to dwell at any length upon what the materia medica demands of a true antidote for the most pernicious of habits. Look at the chemical requirements first. It must have a bitter principle an alkaloid and a volatile odoriferous substance. Passiflora Incarnata has them all. Physiologically, such a remedy must quicken the heart. This preparation quickens the action to not less than three times the normal standard. It should produce gentle nervous excitement. This preparation promotes just that feeling. Some salivation is imperative; and it salivates slightly. It should cause a sense of warmth in the stomach. It does. It should have a nutrient value. It has. In producing some action upon the bowels, it should cause watery stools. It does.

In short, state what is expected of a remedy that will eradicate all taste or desire for poisons that secure ill-disposed habits, and Passiflora Incarnata as prepared by Mr. Daniel, will satisfy all such demands. Add to this a full realization of its physiological action and noting particularly that it must relieve portal congestion and act on or through the sympathetic nervous system, and it will at once become evident that for functional derangements it is remarkably applicable. Put it in this way and it will be understood:

It is a preparation substitutive for alcohol, opium, cocaine, or any other poison of any kind that acts to derange the normal functions of the economy, or of any organ thereof.

W. H. Morse, M. D.

New York, Nov. 4, 1898.

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We call the attention of our readers to the advertisement of the Robinson-Pettet Co., Louisville, Ky., which will be found on another page of this issue. This house was established fifty years ago, and enjoys a widespread reputation as manufacturers of high character. We do not hesitate to endorse their preparations as being all they claim for them.

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Tuberculosis and Milk.

At the opening of the session at the Royal Veterinary College, Professor Shave delivered the introductory address, in which he considered at some length the subject of bovine tuberculosis and the transmission of tubercle by means of contaminated milk. (British Medical Journal, Oct. 8th, 1898.) As to the prevalence of the disease among cows, he said there could be no question; and it was well established that the disease could be and was transmitted to man by means of milk from animals suffering from the disease. The matter was a grave public danger which had not received the attention it deserved, but much might be done by adopting the recommendations of the Royal Commission of 1898—namely, the inspection of dairy cows by veterinary surgeons, and the giving of powers to medical officers of health, on the certificate of a veterinary surgeon, to stop the distribution of milk drawn from diseased animals. As a means of diagnosis, tuberculin was a perfectly trustworthy agent, if used by competent observers; and Professor Shave strongly advised that it should be used freely for this purpose.

Alcoholism in France.

In the opening lecture of his course Dr. Debove of Paris, sounded a note of alarm. (British Medical Journal, Nov. 26, 1898.) He declared that alcoholism was present everywhere in France, in the towns, in country villages, and among all classes. The resources and strength of the country were impoverished by this vice. It was no longer a condition of acute and sporadic alcoholism; alcoholism was now chronic in France. That country, according to Dr. Debove, has the unfortunate supremacy of being at the head of all the "ethylic nations." The proportion of alcohol at 100 deg. drunk amounts in Paris to $14\frac{1}{2}$ litres per head, in Belgium and Germany 10 litres, England 9 litres, Switzerland 8, Italy 6, Sweden 4, Norway 3, Canada 2. This unenviable supremacy is on the increase, as it is in Belgium, the proportion in the other countries being a descending scale. There are in France 500,000 wine shops; in the North of France one for every twenty-five adults; in the Seine Inférieure Department one for every twenty-two adults, in Paris one for every three houses, not counting the railway station bars. Dr. Debove told his hearers that no one escapes this epidemic; children, young girls, men, women all suffer from it. In some parts of France nurslings are brought up by bottle *a l'alcool*. Dr. Debove calls upon the medical world by example, and by carrying on a crusade against this invading tide of alcoholism, to try to stem it.

Post-epileptic Albuminuria.

According to the British Medical Journal Galante has examined the urine of sixteen epileptics (14 male and 2 female) free from cardiac or vascular lesions, with a view to determining the presence or absence of albuminuria after an attack. The urine was drawn by catheter immediately after an attack, and the albumen estimated quantitatively by Scheier's method. In every case albumen was found varying from 2.04 g. to 0.25 g. per cent. In two cases, after very violent attacks, a few hyaline casts were seen. The albuminuria lasted from four to twelve hours. If there had been pre-existent albuminuria the amount was always increased after a fit. There was a constant relation between the amount of indican observed in the urine. Assuming that albuminuria is due to some renal epithelial change of a temporary and fugitive nature in epilepsy, the author points out several factors in the epileptic attack likely to induce such changes in the renal epithelium—for example, the circulatory disturbances caused by the convulsive spasm of the thorax, the autotoxins found in the blood, the intense muscular work done in the fit, and lastly the concentration of the urine from excessive perspiration.

A little boy af Beaver Falls, Pa., placed a tube of a bicycle pump in a baby's mouth and began pumping in air. The child's stomach swelled like a balloon and in a few minutes she became unconscious. The mother is reported to have arrived in time to save the child's life and probably "blew up" the little boy.

The Treatment of Chronic Enteritis.

Dr. E. P. Hershey reaches the following conclusions:

"Chronic enteritis is an affection impossible to overcome just so long as irritation continues. This irritation is due mainly to fermentative changes brought about by pathological conditions in the intestinal glands resulting in vitiated secretions. The prevention of excessive fermentation takes away the irritation and allows the uninterrupted restoration of the glands affected. This result is best accomplished by means of a remedy that will act locally upon the glands and will prevent excessive fermentation.

The two best known remedies for this purpose are benzonapthol and eudoxine (the bismuth salt of tetra-iodo-phenophtalein), the latter having the advantage over the former, that it persists in being a local remedy in the intestinal canal, whereas the former, though acting locally, liberates benzoic acid in sufficient quantities to become sooner or later a renal irritant.

Eudoxine is a remedy well worthy of a thorough trial also in the treatment of typhoid fever.

In its action upon the intestinal canal, eudoxine is identical to the old standard preparation of the comp. tr. iodine, with none of its dangers and inconveniences in its administration, which disagreeable features have of recent years made it a drug of the past. By the administration of eudoxine we avoid all gastric irritation, and in sufficiently large doses can completely disinfect the alimentary canal with no systemic poisoning with the iodine contained in it, the same being held in firm chemical combination with phenolphtalein, and with small doses frequently repeated we can readily prevent over-fermentative processes occurring in the intestines. The remedy is insoluble in the stomach, while in the intestines it splits up by the free alkali of the intestinal secretions into bismuth and tetra-iodo-phenol-phtalein-sodium."

Western Medical and Surgical Gazette, 1898, No. 4, p. 203.

Neurosine vs. Whooping Cough.

Markedly curative. Lessens number and shortens duration of cough. Absolutely indicated in second stage. Always reliable no stomachic disturbance. Produces quiet; restful sleep. Contains no Opium, Morphine or Chloral. No depressing or detrimental after-effects.

The only Rational Remedy FOR TUBERCULOSIS

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COCK'S ANTI-BACILLI COMPOUND,

A Vitalizing, Reconstructive and Nontoxic Bacillicide,

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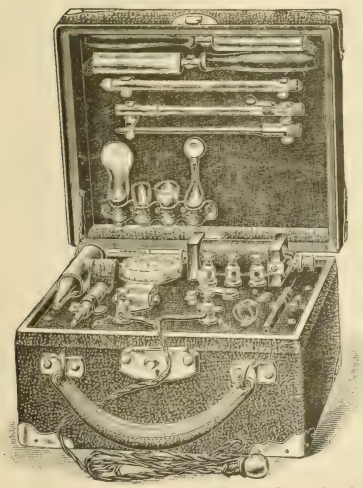

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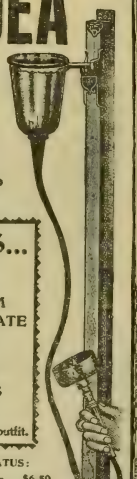

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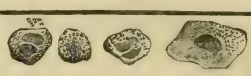

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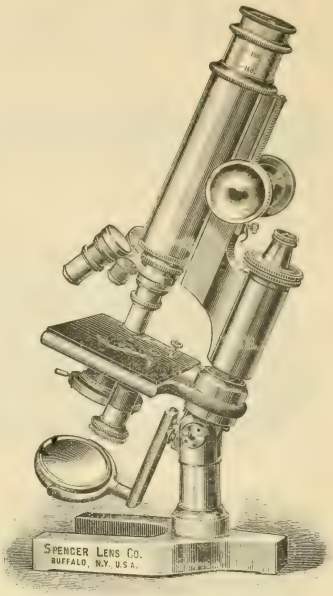

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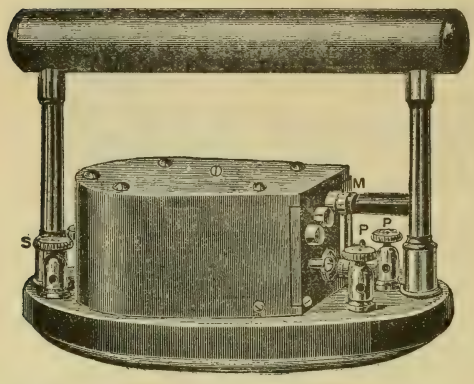

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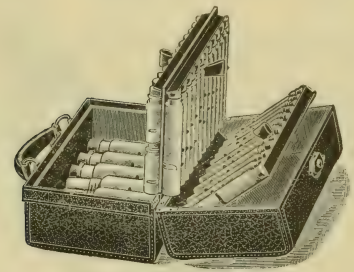

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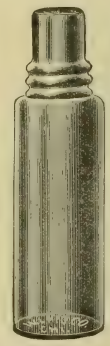

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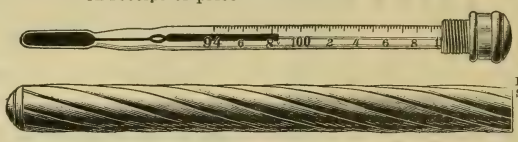

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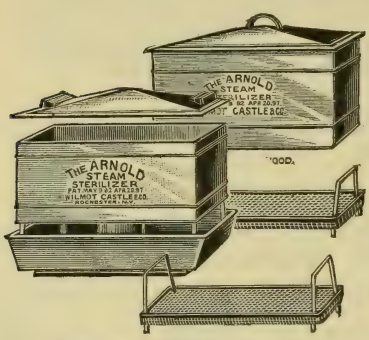

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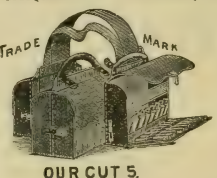

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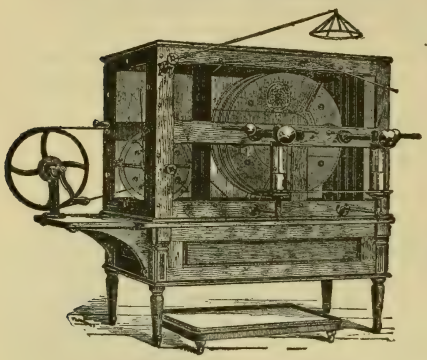

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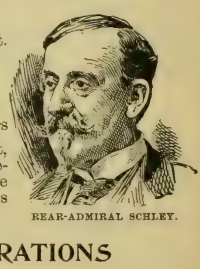

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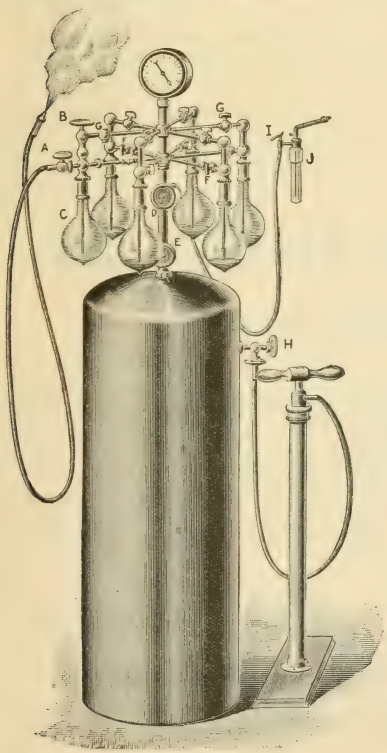

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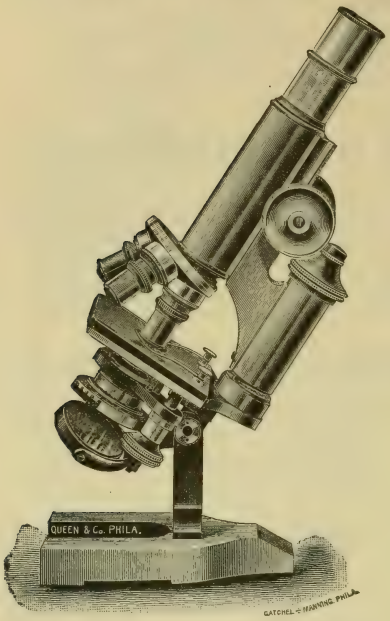

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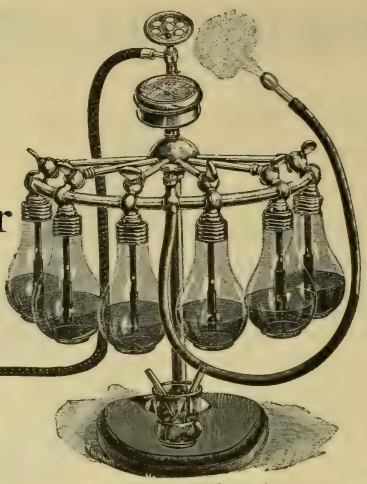

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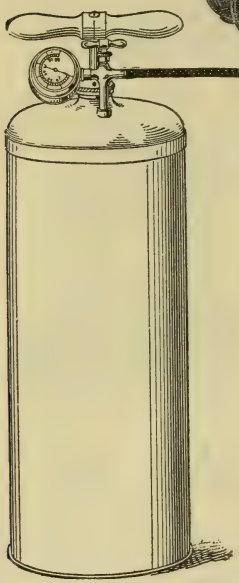

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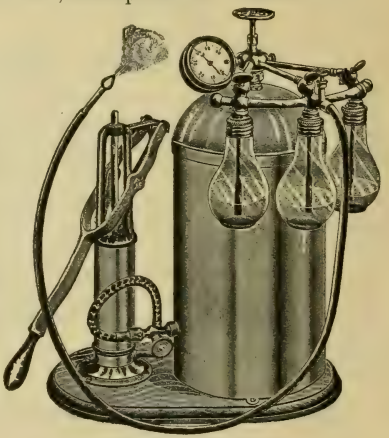

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Dr. E. T. SMITH, Buffalo, N. Y.: "The Aseptolin has done more good than any treatment I ever used in tuberculosis."

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S. A. L. R. R. Schedule in Effect August 16, 1898.

SOUTHBOUND.

		No. 403.	No. 41.
Lv. Charlotte,	S. A. L.	*7 50am	*10 25pm
Ar. Clinton.	"	*9 45am	*12 14am
Ar. Abbeville,	"	11 03am	1 35am
Ar. Athens,	"	1 13pm	3 43am
Ar. Atlanta,	(Central time)	2 50pm	5 20am

NORTHBOUND.

		No. 492.	No. 38.
Lv. Charlotte,	S. A. L.	10 25am	*7 50am
Lv. Monroe,	"	*9 40pm	*6 05am
Lv. Hamlet,	"	*11 15pm	8 00am
Ar. Wilmington,	"	.....	*12 05pm
Lv. Raleigh,	"	*2 16am	*11 25am
Ar. Henderson,	"	3 28am	*12 57pm
Ar. Weldon,	"	*4 55am	*2 45pm
Ar. Richmond,	A. C. L.	8 20am	7 34pm
Ar. Washington.	Penn. R. R.	12 31pm	1 30pm
Ar. Baltimore,	"	1 46pm	10 08am
Ar. Philadelphia,	"	3 50pm	3 50am
Ar. New York,	"	*6 23pm	*6 53am
Ar. Portsmouth,	S. A. L.	7 25am	5 20pm
Ar. Norfolk,	"	*7 35am	*5 35pm

* Daily.

WESTWARD.

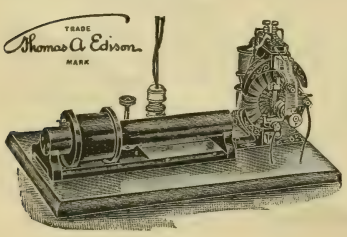
	No. 41.	No. 403.
Lv. Charlotte	10 25pm	7 50am
Ar. Mt. Holly	.....	9 45am
Ar. Lincolnton	.....	10 35am
Ar. Shelby	.....	11 37am
Ar. Ellenboro	.....	12 15pm
Ar. Rutherfordton	.....	12 50pm
†8 40am Lv. Hamlet	Ar.	6 20pm
10 00am Ar. Cheraw	Lv.	†5 00pm

EASTWARD.

	No. 38.	No. 402.
Lv. Charlotte	*5 10am	8 28pm
Ar. Monroe	5 55am	9 10pm
Lv. Monroe	6 05am	9 40pm
Lv. Marshville	6 25am	.....
Lv. Wadesboro	7 01am	10 31pm
Lv. Rockingham	7 41am	11 05pm
Ar. Hamlet	7 55am	11 23pm
Lv. Hamlet	8 20am	.....
Lv. Laurinburg	8 46am	.....
Lv, Maxton	9 05am	.....
Lv. Lumberton	9 53am	.....
Ar. Wilmington	12 05pm	.....

† Daily Ex. Sunday.

Edison Cautery Transformers,



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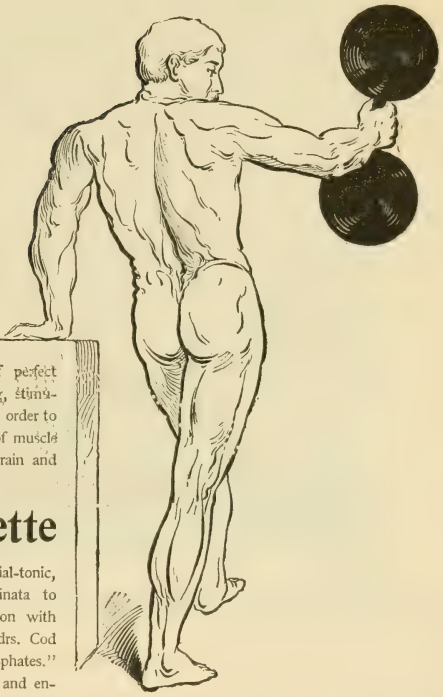

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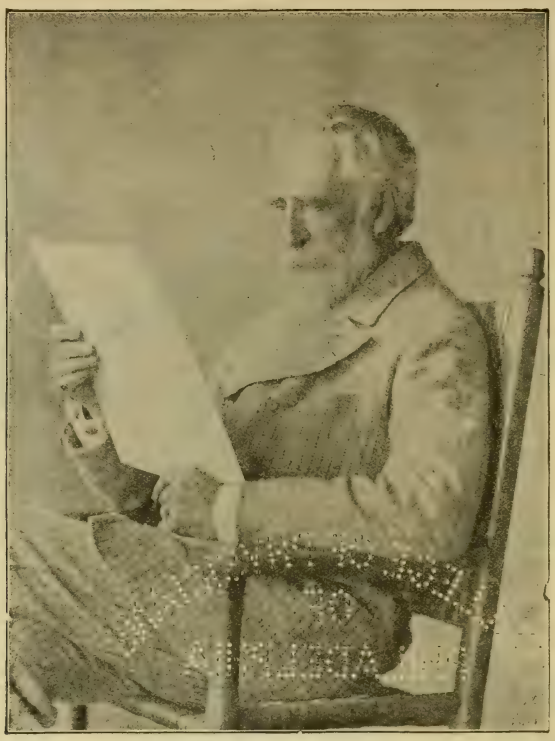

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